

DIGITAL DATA SET

A WORLD-WIDE COMPILATION OF PUBLISHED, MULTICOMPONENT/ANALYSES OF FERROMANGANESE CONCRETIONS

PAGE NBR 1

| MATERIAL PROPERTY DATA | | | | | | | | | | | | | |
|--|--------|-----------------------|------------|----------------------|-----------------|-------------|------------------------|--------------|------|-------------|---------------|--------------------|------|
| MATERIAL CODE / MODULE CODE / LATITUDE / DEPTH | | --(Dg)-- -(M)- | | / LONGITUDE / | | TEST NUMBER | | TEST NUMBER | | TEST NUMBER | | TEST NUMBER | |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| * | MN | PF | VC | TC | PC | ME | MD | ML | MG | LL | NI | CU | ZN |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| * | P | K | EB | T | H | M | M | AG | LL | MG | V | CR | * |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| * | Y | SN | TE | TC | PA | PA | PA | GA | GE | ZR | BE | * | * |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 534 | MER127 | -63.0670 178.4830 | -3583.0000 | 88000 | 124000 | 39160 | 115644 1100 1400 | 17900 | 4600 | 1400 | 2700 | 1300 | 580 |
| 532 | MER128 | -64.1830 -165.9330 | -2932.0000 | 148000 | 110000 | 24343 | 113578 1000 1500 | 15200 | 6300 | 1700 | 7000 | 2900 | 1000 |
| 532 | MER129 | -64.1830 -165.9330 | -2932.0000 | 142000 | 108000 | 24872 | 129937 1000 1500 | 14400 | 5800 | 1500 | 6800 | 3600 | 1200 |
| 532 | WIL123 | -60.0000 -160.0000 | - | 122100 1091 90 | 140400 | - | 122458 788 848 | 12300 234 | - | 1520 17 | 2550 | 1590 653 | 452 |
| 523 | LAM167 | -60.1330 -74.9160 | - | 63000 | 109000 | - | - | - | - | 1100 | 1200 | 700 | - |
| 501 | OSFA01 | -56.4500 140.0600 | -3750.0000 | 169980 1600 | 122000 14000 | 34000 | 160000 800 900 | 20726 500 | 6900 | 900 | 4800 9649 | 2300 300 500 | 1200 |
| 501 | OSFA02 | -56.4500 140.0600 | -3750.0000 | 421224 | 16785 | 1587 | 4673 | 28587 | - | - | 3000 18696 | - | - |
| 501 | OSFA03 | -56.4500 140.0600 | -3750.0000 | 178195 | 349699 | 10054 | 64968 | 15008 | - | - | 36000 7840 | 8000 | - |
| 501 | OSFA04 | -56.4500 140.0600 | -3750.0000 | 447384 | 48258 | 5291 | 8413 | 20726 | - | 4000 | 8000 21711 | 4000 | - |
| 501 | OSFA05 | -56.4500 140.0600 | -3750.0000 | - | - | - | - | - | - | 4000 | 40000 | 15000 | - |

300-123456001

3

A WORLD-WIDE COMPILATION OF PUBLISHED, MULTICOMPONENT/ANALYSES OF FERROMANGANESE CONCRETIONS

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NSF-IDOE
Manganese Nodule Project
Technical Report No. 12
August, 1976

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FRANCE*

A. INTRODUCTION

The available chemical analyses of manganese nodules are scattered throughout the literature thus making a thorough survey of the regional variations in nodule chemistry extremely time consuming. We sought to overcome this problem by gathering together all of the available published analyses of manganese nodules.

This Technical Report is an exhaustive compilation based on a search of the scientific literature (including Russian) since the *Challenger* Report. It differs from previous compilations in that it includes the complete set of major and minor element analyses presented by the authors. Also included is data for "fossil" nodules found in geological formations on land and for fresh water nodules. The complete data file has been organized for the computer and is stored on magnetic tape. This magnetic tape is available from Dr. J. M. Monget (Ecole Des Mines - Paris). The data file management is outlined in the next section.

This compilation was essentially completed in August 1973 for use in the statistical analyses of the regional variations in nodule chemistry and thus does not pretend to be the final word. This cutoff was necessary only so that the compilation could be printed. Newly published data are being added continuously to the compilation and we offer our apologies for any mistakes we have made and sincerely hope that errors and analyses we have missed will be brought to our attention. We anticipate that we will publish a corrected and updated version in the future.

B. THE COMPILATION

The compilation is organized into three sections: Geological, Lake and Marine. Within each of these classifications the nodules are listed by location using the Marsden Square code. For reference, a map of the world showing Marsden Squares is shown in Figure 1.

Each nodule has been given a code that includes an abbreviation of the authors last names and a number which simply refers to the sequence in which the nodules were reported by the authors. This number is not the number used by the author. A list of the codes and the references they refer to are found in Table 1. The complete references are found in the bibliography.

The latitude, longitude and depth of each nodule are given when available. For many analyses no location information was given and thus they could not be assigned a Marsden Square. These analyses are listed at the end of each of the three sections. A minus latitude is south and a minus longitude is west of Greenwich. The positive depths given for the "fossil" nodules refer to the elevation above sea level where the nodules were found.

Finally, the chemical analyses are given in ppm as elements. Data are included for manganese, iron, aluminum, silica, calcium, titanium, cobalt, nickel, copper, zinc, phosphorus, potassium, rubidium, strontium, molybdenum, silver, cadmium, magnesium, vanadium, chromium, yttrium, tin, tellurium, lead lanthanum, tungsten, gallium, germanium, zirconium and beryllium.

C. DATA MANAGEMENT AND DESCRIPTION

We present here the file management and coding schemes which have been used to organize this compilation on the computer. Not all of the information stored on magnetic tape has been reproduced in the enclosed compilation.

The Data Coding Scheme

The data coding is organized in six sections which contain the following information:

- sample identification
- metal concentrations expressed in percent of oxides
- metal concentrations expressed in p.p.m.
- concentrations in various components such as H₂O, O₂....etc., as well as loss at ignition
- information regarding the geographical description of the sample
- information regarding the description and geologic environment of the sample

The data format images which are linked to each of these sections are organized as follows.

| <u>Sample Identification</u> | <u>Columns</u> |
|--------------------------------------|----------------|
| - Nodule code | 1 - 6 |
| - Station idenitfication | 7 - 16 |
| - Name of the analyst (if available) | 17 - 26 |
| - Name of the author | 27 - 36 |
| - Method of analysis | 37 - 46 |

Methods of chemical analyses were referenced using the following codes:

- SPECTRO-CØ = Emission spectrography
- WETCHEM-CØ = Wet chemical analysis
- ATOMIC-ABS = Atomic absorption spectrometry
- NEUTRON-ACT = Radiometric measurement by neutron flux activation
- X-RAYFLUØR = Spectrometric measurement by X-ray fluorescence
- MICRO-PRØB = Microprobe analysis

Concentrations in oxides

| | |
|-----------------|---------|
| - Nodule code | 1 - 6 |
| - Oxide code | 7 - 10 |
| - Unit | 11 |
| - Concentration | 12 - 15 |

Concentrations in elements

| | |
|-----------------|---------|
| - Nodule code | 1 - 6 |
| - Element code | 7 - 8 |
| - Unit | 9 |
| - Concentration | 10 - 15 |

Various components and residuals

| | |
|-----------------|---------|
| - Nodule code | 1 - 6 |
| - Item code | 7 - 11 |
| - Unit | 12 |
| - Concentration | 13 - 16 |

In this section are stored the concentrations in the following components:

- CACØ3, CASØ4, CAPØ4, CØ₂, CL
- S, SØ₂, H₂Ø, H₂Ø₊, H₂Ø₋
- Ø₂ = free oxygen
- C.ØRG = organic carbon
- DRLØ = loss at drying
- IGLØ = loss at ignition

Geography

- Nodule code 1 - 6
- Geographic item 7 - 10
- Value a code 11 - 20

Three types of information are included in this section:

- LAT = Latitude
- LØN = Longitude
- ALT = Depth or altitude of sample

Positives altitudes may appear for lake or geologic nodules.

Description and environment

- Nodule code 1 - 6
- Type of information 7 - 10
- Code 11 - 20

This section contains two types of information:

- GEO = Wide category of environment to which are related the following codes:
 - SEA - FLØR
 - SHALLØW - WT
 - LAND ØRE
- TYPE = Description of the general morphology of the sample such as:
 - NØDULE
 - CRUST
 - CONCRETION
 - COATING

This data coding scheme was chosen for its flexibility in the coding itself because text and numerals can be intermixed. It also presents the

capability of being very easily extended in order to include more complex information such as the mineralogy of the samples or the description of the associated sediments.

File Management

The nodule code, which is a six character word, is used to link all the items related to the same nodule described in the previous sections.

Each item is punched on cards and is processed by a specific program whose name can be found in Fig. 2. They are all merged in one file which is sorted by nodule code so that the records related to a specific sample are clustered together.

Fig. 3 displays such a cluster of records for a data sample published in MERO - 1965.

Data Display

Various computer programs have been developed in order to display the recorded data using various criterion such as:

- geographical location
- type of metal analysed
- name of the author

Some crude statistical scheme can also be selected in order to summarize the information related to samples which have the same location or which are very close to one another. The available statistics are of three types: average, maximum and minimum.

D. ACKNOWLEDGEMENTS

This world-wide compilation of data regarding the geochemistry of manganese nodules is due to the part time work of a number of individuals whose names and institutions are listed hereafter: B. Bornold (Bedfort Institute - Canada), J. Masclé (CNEXO - France), J. M. Monget (Ecole des Mines - France), J. W. Murray (Univ. Washington - USA) and W. Young (Woods Hole Ocean. Inst. - USA).

We have benefited in particular from the advice of Dr. F. Manheim to whom we are particularly indebted for having constantly encouraged us in pursuing this work.

We also thank very much Dr. S. Gerard for his interest and patience which have enabled us to pursue this compilation to the end.

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Table 1

List of codes used in the compilation and the references they refer to. The complete references are given in the bibliography.

LAKE NODULES

| | | |
|------|--|------------------|
| CALL | Callender E. | (1973) |
| CAP | Calvert S.E. and Price N.B. | (1970) |
| DEAN | Dean W.E. | (1970) |
| EDGT | Edgington D.N. and Callender E. | (1970) |
| GOSW | Gorham E. and Swaine D.J. | (1965) |
| H-T | Harriss R.C. and Troup A.G. | (1969) |
| KIND | Kindle E.M. Kindle E.M. | (1932) (1932) |
| ROCA | Rossman R. and Callender E. | (1968) |
| ROSC | Rossman R. and Callender E. | (1969) |
| SF | Schoettle M. and Friedman G.M. | (1971) |
| TWMN | Twenhofel H., McKelvey V.E., Nelseon H.F., and Feray D.E. | (1945) |

FOSSIL NODULES

| | | |
|------|----------------------------------|--------|
| AUCH | Audley-Charles M.G. | (1965) |
| BOUR | Bourbon M. | (1974) |
| GR | Gulbrandson R.A. and Reeser D.W. | (1969) |
| MASC | Masicle G. | (1972) |
| SIGT | Signal J. and Truillet R | (1966) |

MARINE NODULES

| | | |
|-------|--|--------|
| ANON | Anon | (1968) |
| ARGO | Arrhenius G.O.S. and Goldberg E.D. | (1958) |
| AULP | Aumento F., Lawrence D.E. and Plant A.G. | (1968) |
| BARN | Barnes S.S. | (1967) |
| BEAN | Bezrukov P.L. and Andrushchenko P.F. | (1973) |
| BOJO | Bonatti E. and Joensuu O. | (1966) |
| BUCH | Buchanan J.Y. | (1891) |
| BUFU | Burns R.G. and Fuerstenau D.W. | (1966) |
| COLL | Collet | (1908) |
| CRON | Cronan D.S. and Tooms J.S. | (1967) |
| CROT | Cronan D.S. and Tooms J.S. | (1969) |
| CROI | Cronan D.S. and Tooms J.S. | (1969) |
| CRTH | Cronan D.S. | (1967) |
| CTMI | Cronan D.S. and Tooms J.S. | (1968) |
| DERY | Deryugin K.M. | (1928) |
| DICH | Dietz R.S. | (1955) |
| ELWA | El Wakeel S.K. and Riley J.P. | (1961) |
| FEMO | Fein C.D. and Morgenstein M. | (1973) |
| GLAS | Glasby G.P. | (1972) |
| GOLD | Goldberg E.D. | (1954) |
| GORST | Gorshkova T.I. | (1931) |
| | Gorshkova T.I. | (1931) |

| | | |
|------|--|--------|
| GRAN | Grant J.B. | (1967) |
| GRMU | Grill E.V., Murray J.W. and MacDonald R.D. | (1968) |
| GTC | Glasby G.P., Tooms J.S. and Cann J.R. | (1971) |
| GUTH | Gumbel C.W. | (1878) |
| HEWE | Hewett D.F., Fleischer, Michael and Conklin | (1963) |
| LAMO | Lamont-Doherty Geological Observatory in Horn D.R., Delach M.N. and Horn B.M. | (1973) |
| LAMI | Lamont-Doherty Geological Observatory in Horn D.R., Delach M.N. and Horn B.M. | (1973) |
| LAQU | Laque F.L. | (1971) |
| MANH | Manheim F.T. | (1965) |
| MERO | Mero J.L. | (1965) |
| MERI | Mero J.L. | (1965) |
| MGH | Menard H.W., Goldberg E.D. and Hawkes H.E. | |
| MURI | Murray J. and Irvine R. | (1894) |
| MURR | Murray J. and Renard A.F. | (1891) |
| NIIN | Niino H. | (1959) |
| NIKO | Nikolayev D.S. and Yefimova E.R. | (1963) |
| OSFA | Ostwald J. and Frazer F.W. | (1973) |
| PABA | Pachadzhanov D.N., Bandurkin G.A., Migdivsov A.A. and Giren Y.P. | (1963) |
| RAAB | Raab W. | (1972) |
| RAAI | Raab W. | (1972) |
| RAPE | Rancitelli L.A., and Perkins R.W. | (1973) |
| SAN | Skornyakova N.V. and Andruschenko P.F. | (1970) |
| SCRI | Scripps Institution of Oceanography Sediment Data Bank | |

SGG Smith R.E., Gassaway J.D. and Giles H.N. (1968)

SKOR Skornyakova N.V., Andruschenko P.F.
and Fomina L.S. (1962)

STSH Strakhov N.M., Shterenberg L.Y.
and Kalinenko V.O. (1968)

SUMM Summerhayes C.P. (1967)

SUWI Summerhayes C.P. and Willis J.P. (1973)

VHBA Van Hecke M.C. and Bartlett R.W. (1973)

W-A Ahrens L.H., Willis J.P. and Oosthuizen C.O. (1967)

WHOI Hathaway and Manheim F.T. (1971)

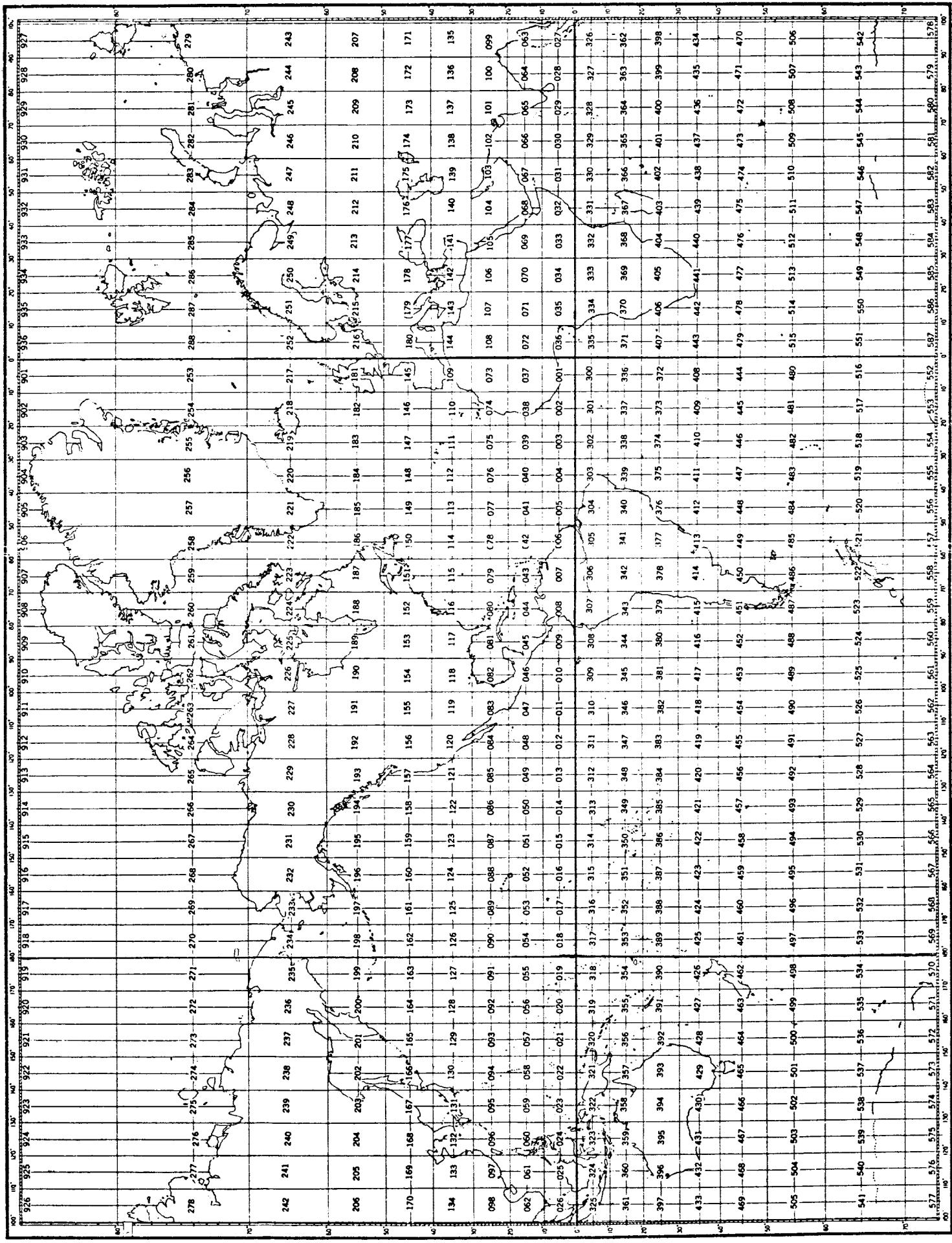
WILI Willis J.P. (1970)

WILL Willis J.P. and Ahrens L.N. (1962)

WINT Winterhalter B. (1966)

FIGURE 1

MARDSEN SQUARE CHART



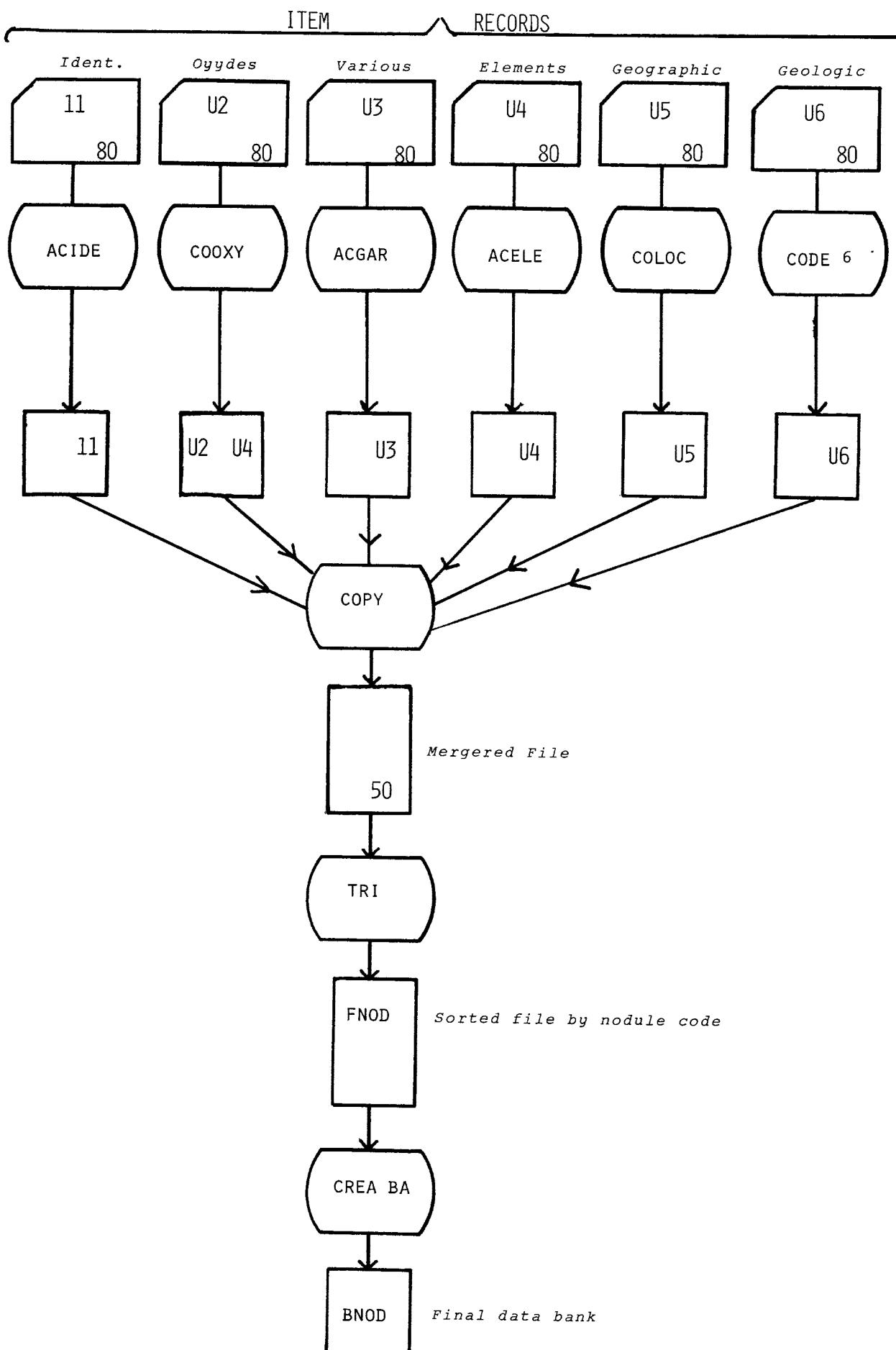


FIGURE 2
FLOW CHART OF THE NODULE FILE MANAGEMENT

28

| | | |
|----------------------|------|--------------|
| MER114CHAL299 | MERO | SPECTRO.C011 |
| MER114AL20P 4.70 | | 02 |
| MER114S102P12.20 | | 02 |
| MER114H20 P118 | | 03 |
| MER1141GLO P180 | | 03 |
| MER114PBP 16 | | 04 |
| MER114SRP 2 | | 04 |
| MER114CAP 13 | | 04 |
| MER114K P 6 | | 04 |
| MER114MNP29 | | 04 |
| MER114TIP 14 | | 04 |
| MER114CUP 15 | | 04 |
| MER114NIP 15 | | 04 |
| MER114COP 8 | | 04 |
| MER114FEP 25 | | 04 |
| MER114MOP 47 | | 04 |
| MER114BAP 2 | | 04 |
| MER114ZNP 7 | | 04 |
| MER114ALP 24872 | | 04 |
| MER114SIP 57022 | | 04 |
| MER114ALT -3950.0000 | | 05 |
| MER114LAT -33.5170 | | 05 |
| MER114LONG -74.7170 | | 05 |
| MER114GEO SEA-FLOOR | | 06 |
| MER114TYPENODULE | | 06 |

FIGURE 3

EXAMPLE OF RECORDS RELATED TO THE SAME
SAMPLE AND STORED IN THE FINAL DATA BANK

GEOLOGIC DATA

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / | NUDULE CODE / | LATITUDE / | DEPTH / | * MN | * FE | * AL | * SI | * CA | * TI | * CO | * NI | * CU | * ZN | | |
|----------------|---------------|--------------------|-----------|------|---------------|----------------|------------|---------------|---------------|--------------|------------|----------------|---------------|------------|--------------|
| ----- | ----- | ---(D)--- | -(M)- | * P | * K | * RB | * SR | * MO | * AG | * CD | * MG | * V | * CR | | |
| ----- | ----- | LONGITUDE / | ----- | * Y | * SN | * TE | * PB | * LA | * M | * GA | * GE | * ZR | * BE | | |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | | |
| 156 | GR 01 | -45.0000 | -113.0000 | - | - | 144735 9172 | 4266 20 | 29635 - | 179548 100 | 100057 70 | 479 - | 2200 1200 | 13000 1387 | 205 700 | 25000 700 |
| 156 | GR 02 | -45.0000 | -113.0000 | - | - | 57847 8299 | 3846 30 | 18521 - | 232765 100 | 98628 50 | 599 - | 800 500 | 6800 25330 | 150 150 | 14000 100 |
| 144 | BUUR29 | 30.0400 20.8300 | - | - | 78601 2795 | 777 211 | 20109 - | 60995 190 | 164380 44 | 3537 - | 744 - | 1070 7538 | 171 448 | 268 8 | |
| 144 | BUUR32 | 30.0000 20.8800 | - | - | 18512 - | 25877 415 | 7408 - | 34587 510 | 326617 - | 387 - | 606 5 | 825 8684 | 69 209 | 48 6 | |
| 144 | BUUR35 | 30.0000 20.8700 | - | - | 11525 - | 85326 581 | 20638 - | 132741 320 | 198686 - | 2517 - | 1400 12 | 153779 1534 | 16 344 | 730 5 | |
| 144 | BUUR36 | 30.0000 20.8700 | - | - | 13181 - | 63645 664 | 20638 - | 108436 312 | 236565 - | 2162 - | 1330 11 | 14534 12 | 37 240 | 523 5 | |
| 144 | BUUR37 | 30.0000 20.8700 | - | - | 17143 - | 79731 830 | 18521 - | 95349 328 | 242997 - | 2185 - | 1240 12 | 12725 11 | 17 1 | 529 5 | |
| 144 | BUUR38 | 30.0000 20.8700 | - | - | 34142 - | 7693 3403 | 16405 - | 64968 327 | 303032 - | 959 - | 180 - | 326 4523 | 107 55 | 81 5 | |
| 144 | BUUR39 | 30.0000 20.8700 | - | - | 9436 - | 144775 2573 | 20638 - | 101425 253 | 195827 - | 3237 - | 378 15 | 31100 11519 | 105 448 | 24 5 | |
| 144 | BUUR40 | 30.0000 20.8700 | - | - | 3616 - | 62246 498 | 38631 - | 39261 520 | 272300 - | 1079 - | 1C20 11 | 26958 12 | 82 349 | 454 5 | |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / | NUCLEAR CODE / | LATITUDE / | DEPTH / | * MN * | * FE * | * AL * | * SI * | * CA * | * TI * | * CO * | * NI * | * CU * | * ZN * | |
|----------------|----------------|---------------------|-----------|----------------|-----------------|---------------|------------|--------------|--------------|-------------|------------|--------------|------------|--------------|
| ----- | ----- | ---(DG)--- | ---(M)--- | * P * | * K * | * RB * | * SR * | * MO * | * AG * | * CC * | * MG * | * V * | * CR * | |
| ----- | ----- | / LONGITUDE / | ----- | * Y * | * SN * | * TE * | * PB * | * LA * | * W * | * GA * | * GE * | * ZR * | * BE * | |
| ***** | ***** | ***** | ***** | * * | * * | * * | * * | * * | * * | * * | * * | * * | * * | |
| 144 | BUUK41 | 30.0000 2.8700 | - | - | 4091 | 64344 498 | 42865 - | 45337 449 | 255862 2 | 2457 - | 1050 13 | 32024 12 | 192 268 | 477 53 |
| 144 | BUUK42 | 30.0000 2.8700 | - | - | 7181 | 112603 415 | 44452 2 | 52816 377 | 212980 31 | 2817 - | 979 14 | 33773 16 | 154 596 | 607 5 |
| 144 | MASCO1 | 37.3452 3.6360 | 720.0000 | 8053 | 307870 1441 | 14288 4150 | - | 33559 - | 28659 - | 779 - | - | 27380 - | - | - |
| 144 | MASCO3 | 37.3055 3.5220 | 300.0000 | 18956 | 324777 4979 | 14182 1328 | - | 7945 - | 146727 - | 1498 - | 300 - | 1000 6995 | - | - |
| 144 | MASCO4 | 37.2717 3.2150 | 380.0000 | 44106 | 59433 3712 | 4150 - | - | 11377 - | 18181 - | 287023 - | 2218 - | - | - | 4824 |
| 144 | MASCO6 | 37.3652 3.3200 | 480.0000 | 131403 | 86454 917 | 6932 - | - | 12666 - | 217626 - | 1378 - | - | - | - | 1400 6573 |
| 144 | MASCO7 | 37.5800 3.4700 | 1000.0000 | 121019 | 204804 1441 | 9843 - | - | 9534 - | 164309 - | 4616 - | 800 - | 1200 5910 | - | - |
| 143 | MASCO2 | 37.5222 1.3.2043 | 700.0000 | 3917 | 384063 10177 | 31804 7139 | - | 85253 - | 25586 - | 1918 - | 100 - | - | - | 5427 |
| 143 | MASCO5 | 37.5140 1.3.2026 | 975.0000 | 75954 | 96569 1266 | 7197 996 | - | 6076 - | 259364 - | 2937 - | 1000 - | - | - | 1200 5246 |
| 143 | SIG101 | 37.8600 1.5.2900 | 100.0000 | 62000 17200 | 187000 - | 27000 - | - | 109000 - | 6400 - | - | - | - | - | 33000 - |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH | DEPTH / (M) - | FE * AL * | SI * | CA * | Tl * | CU * | Ni * | CO * | NI * | CU * | ZN * |
|---|--------------------|--------------------|-----------------|-----------------------|------------|-------------|----------------------|--------|------------|-----------|------------|
| ----- / LONGITUDE / | ----- | * Mn * | * FE * | * AL * | * SI * | * CA * | * Tl * | * CO * | * Ni * | * CU * | * ZN * |
| ----- | ----- | * P * | * K * | * RB * | * SR * | * MO * | * AG * | * CD * | * MG * | * V * | * CR * |
| ----- | ----- | * Y * | * SN * | * TE * | * PB * | * LA * | * W * | * GA * | * GE * | * ZR * | * BE * |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 143 SIGT02 | 37.8000 15.2000 | 100.0000 118000 | 156500 17200 | 23000 - | - | 130000 - | 4400 - | - | 37500 - | - | - |
| 108 BUJRC01 | 29.8500 20.8600 | - | - | 6427 5678 20 | 10071 - | - | 394394 360 19 | - | 63 158 | 51 28 | 63 |
| 108 BUJRC02 | 29.8500 20.8600 | - | - | 27577 310 | 6714 - | - | 106106 700 6 | - | 42 60 | 106 85 | 76 42 |
| 108 BUJRC03 | 29.9000 20.7800 | - | - | 31363 1485 32 | 14827 - | - | 268288 2200 22 | - | 75 106 | 16 106 | 24 - |
| 108 BUJRC04 | 29.9000 20.7800 | - | - | 24393 3843 23 | 26926 - | - | 282282 970 53 | - | 187 - | 287 - | 11 115 |
| 108 BUJRC05 | 29.9000 20.7800 | - | - | 46446 3407 10 | 45460 - | - | 260260 600 76 | - | 46 - | 343 - | 58 110 |
| 108 BUJRC06 | 29.9000 20.9600 | - | - | 6195 36909 130 | 32172 - | - | 156957 - | - | - | - | - |
| 108 BUJRC07 | 29.9000 20.9600 | - | - | 34847 39311 130 | 23639 - | - | 204604 785 370 | - | - | - | - |
| 108 BUJRC08 | 29.9000 20.9600 | - | - | 41430 38875 205 | 93020 - | - | 1100 1050 | - | 415 - | 800 - | 195 102 |
| 108 BUJRC09 | 29.7000 3.0100 | - | - | 28265 436 | 2447 - | - | 35555 275 | - | 207 - | 56 - | 50 22 |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (M) / LUNGITUDE / | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
|---|---|---|-----------------|----------------|-------------|--------------|---------------|-------------|-----------|--------------|------------|------------|-------------|------------|------------|-----------|----------|---|---|---|---|---|
| 108 BOUR10 29.7000 3.0100 | - | - | 12C80 10483 | 5175 | - | - | 550 48 | 246246 - | - | - | - | 1730 - | 1400 - | 105 90 | 220 - | - | - | - | - | - | | |
| 108 BOUR11 29.7000 3.0100 | - | - | 13784 1048 | 1049 | - | - | 500 70 | 290690 - | - | - | - | 1000 - | 1100 - | 70 70 | 130 - | - | - | - | - | - | | |
| 108 BOUR12 29.7000 3.0100 | - | - | 27336 2795 | 839 | - | - | 490 73 | 181782 - | - | - | - | 950 - | 770 - | 88 - | 135 - | - | - | - | - | - | | |
| 108 BOUR13 29.9000 2.9000 | - | - | 2942 17908 | 2642 4732 | 20109 | 142556 | 171527 240 | 3117 10 | 122 1 | 345 6 | 50 5729 | 208 12 | 540 6 | 88 497 | 46 - | 3 | - | - | - | - | - | |
| 108 BOUR14 29.9000 2.9000 | - | - | 115751 11403 | 10490 5811 | 17198 17 | 51881 870 | 311609 32 | 539 1 | 208 10 | 540 16283 | 255 - | 157 116 | 193 3317 | 157 210 | 32 20 | 124 77 | - | - | - | - | - | |
| 108 BOUR15 29.9000 2.9000 | - | - | 6195 17035 | 117499 4150 | 14023 10 | 44870 400 | 265153 8 | 3267 1 | 86 1 | 540 15 | 255 - | 157 7 | 193 7 | 157 - | 32 - | 32 20 | - | - | - | - | - | |
| 108 BOUR16 29.9000 2.8000 | - | - | 3871 122303 | 6218 4566 | 18521 20 | 63098 530 | 294813 25 | 1198 1 | 289 - | 622 11458 | 129 - | 121 112 | 622 - | 129 112 | 127 34 | 127 34 | - | - | - | - | - | |
| 108 BOUR17 29.9000 2.7600 | - | - | 3562 6333 | 40215 5396 | 16934 3 | 80338 - | 263366 72 | 1318 - | - | 5 5 | - | 30 8443 | 121 61 | 37 - | 20 - | - | - | - | - | - | - | |
| 108 BOUR18 29.8000 2.8700 | - | - | 298 79060 | 544 9962 | 9102 2 | 58892 540 | 325545 13 | 1019 1 | 5 - | 21 12061 | 21 - | 8 8 | 21 - | 24 10 | 20 - | - | - | - | - | - | - | |
| 108 BOUR19 29.9000 2.7800 | - | - | 1626 71635 | 20209 830 | 13494 11 | 72914 540 | 278018 14 | 599 1 | 48 - | 12665 62 | 48 - | 127 9 | 78 - | 127 211 | 141 142 | 127 - | 141 - | - | - | - | - | |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / -(M)- | (UG)--- / LONGITUDE / | MIN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | MIN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * |
|---|-----------------------|--|--|
| 108 BUUR20 | 29.9000 2.8000 | - 3550 15736 13388 77588 292669 1198 - 70 178 94 136 | - 53726 332 19 - 800 500 48 - - 7237 181 23 - |
| 108 BUUR21 | 29.8500 2.8700 | - 232 17100 14288 171535 210121 1378 - 126 305 300 144 | - 88670 830 4 - 24 630 24 - 14 12061 218 47 - |
| 108 BUUR22 | 29.8500 2.8700 | - 500 16323 16934 144426 237637 839 - 101 198 228 145 | - 71635 498 2 - 12 420 14 - 10 11157 146 25 - |
| 108 BUUR23 | 29.8500 2.8700 | - 1006 29724 6879 74316 299101 1198 - 50 209 109 85 | - 19044 830 - - 285 16 - 6 8141 162 12 - |
| 108 BUUR24 | 29.8500 2.8700 | - 232 20209 12700 188829 191539 1498 - 60 172 240 130 | - 84302 498 - - 355 7 - 10 - 8141 142 26 - |
| 108 BUUR25 | 29.8500 2.8700 | - 783 10571 5397 107969 281591 1019 - 133 225 274 115 | - 62680 1245 - - 500 26 - 9 - 12363 142 30 - |
| 108 BUUR26 | 29.8500 2.8700 | - 1161 14687 9419 81794 280519 1498 - 89 198 258 60 | - 4586 830 - - 205 16 - 6 - 13268 162 20 - |
| 108 BUUR27 | 29.8500 2.8700 | - 605 4196 6244 153774 249072 1139 - 29 86 310 63 | - 73382 1660 563 - - 54 24 - 6 - 5729 75 22 - |
| 108 BUUR28 | 29.8500 2.8600 | - 800 5829 9260 88338 192968 1079 - 40 158 27 88 | - 22276 1245 314 - - 68 14 - 10 - 8744 660 40 - |
| 108 BUUR30 | 29.6000 2.9600 | - 23619 4275 6879 78289 255147 1318 - 788 1400 75 500 | - 89980 1660 623 126 - 890 32 - 10 9649 214 37 - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / DEPTH / DEPTH / DEPTH | (M) - (M) - (M) - (M) - (M) - (M) - | LATITUDE / LUNGTJD / LUNGTJD / LUNGTJD / LUNGTJD / LUNGTJD / LUNGTJD | | | | | | | | | | | | | | | | |
|---|-------------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |

| | | | | | | | | | | | | | | | | | |
|-----|--------|-------------------|---|---|--------|--------|-------|--------|--------|------|------|------|------|-----|----|--|--|
| 1C8 | BUUR31 | 29.6000 2.9500 | - | - | 6582 | 16323 | 8467 | 53947 | 265879 | 599 | 53 | 205 | 21 | 74 | | | |
| 108 | BUUR33 | 29.8000 2.6700 | - | - | 14118 | 4895 | 6879 | 14489 | 360923 | 479 | 105 | 139 | 31 | 5 | CR | | |
| 108 | BUUR34 | 29.8000 2.6700 | - | - | 218 | 20981 | 31222 | 59359 | 300173 | 541 | 24 | 74 | 20 | 7 | BE | | |
| 108 | BUUR43 | 29.9000 2.8900 | - | - | 2328 | 34969 | 21697 | 107034 | 263009 | 1710 | 51 | 164 | 183 | 70 | | | |
| 108 | BUUR44 | 29.7500 3.0400 | - | - | 90037 | 2098 | 2645 | 12152 | 327332 | 359 | 196 | 1250 | 87 | 87 | | | |
| 108 | BUUR45 | 29.7500 3.0400 | - | - | 50421 | 183242 | 2116 | 5141 | 250144 | 479 | 71 | 128 | 36 | 17 | | | |
| 108 | BUUR46 | 29.7500 3.0400 | - | - | 30541 | 415443 | 3704 | 14021 | 130075 | 659 | 55 | 149 | 43 | 149 | | | |
| 108 | BUUR47 | 29.7500 3.0400 | - | - | 33854 | 411246 | 4762 | 7478 | 122213 | 479 | 55 | 164 | 45 | 379 | | | |
| 108 | BUUR48 | 29.7500 3.0400 | - | - | 16855 | 25178 | 1058 | 5608 | 361638 | 359 | 9 | 44 | 18 | 36 | | | |
| 108 | BUUR49 | 29.7500 3.0400 | - | - | 346625 | 9791 | 3704 | 19163 | 106490 | 479 | 1600 | 549 | 1075 | 579 | | | |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / NODULE CODE / LATITUDE / DEPTH / (LOG) - (M) - | | MN | FE | AL | SI | CA | Tl | CO | NI | CU | ZN | * |
|--|---|----|----|--------|-------|-------|--------|-------|------|----|-------|---|
| / LONGITUDE / | | P | K | RB | SR | MO | AG | CD | MG | V | CR | * |
| | | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE | * |
| | | * | * | * | * | * | * | * | * | * | * | * |
| AUCH01 | - | - | - | 655 | 50798 | 87053 | 281140 | 1CC77 | 4556 | - | 13991 | - |
| AUCH02 | - | - | - | 873 | 41501 | 73241 | 259079 | 42596 | 2757 | - | 16102 | - |
| AUCH03 | - | - | - | 377132 | 9441 | 7937 | 139752 | 6432 | 0 | - | 11941 | - |
| AUCH04 | - | - | - | 311463 | 0 | 8996 | 157280 | 7861 | - | - | 1C674 | - |

LAKE DATA

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM -

| MARDEN CODE / MODULE CODE / LATITUDE / DEPTH / (W) | | CHEMICAL ANALYSES IN PPM - | | | | | | | | | | | | | |
|--|--|----------------------------|----------|--------|--------|------|-------|-------|------|------|-----|------|------|------|---|
| EDGT05 / 45.3840 / -85.1170 | | MN * FE * AL * | SI * | CA * | Tl * | CO * | NI * | CU * | ZN * | CR * | V * | MG * | GE * | BE * | * |
| EDGT06 / 45.3840 / -85.1170 | | P * K * | RB * | SR * | MD * | AG * | CD * | MG * | V * | CR * | * | * | * | * | * |
| EDGT07 / 45.3840 / -35.1170 | | Y * SN * | TE * | PB * | LA * | W * | GA * | GE * | ZR * | BE * | * | * | * | * | * |
| ROSC01 / 45.0700 / -87.3200 | | 45.3840 / -87.3200 | -28.3300 | 12200 | 299200 | 300 | 10700 | - | 252 | 101 | 45 | 163 | - | - | - |
| ROSC02 / 45.0700 / -87.3200 | | -22.0000 | 20400 | 162200 | 430 | - | 10000 | - | 168 | 143 | 72 | 330 | - | - | - |
| ROSC06 / 42.1400 / -87.4500 | | -32.0000 | 216800 | 64000 | 590 | - | - | 24800 | - | 273 | 571 | 7400 | - | 595 | - |
| ROSC07 / 42.1400 / -87.5200 | | -13.0000 | 25000 | 233400 | 550 | - | - | 6400 | - | 125 | 125 | 5000 | 109 | - | - |
| ROSC08 / 44.9400 / -87.3900 | | -17.0000 | 8500 | 394500 | 250 | - | - | 7100 | - | 179 | 126 | 6600 | 207 | - | - |
| ROSC09 / 44.9400 / -87.4800 | | -28.0000 | 102400 | 217800 | 1220 | - | - | 25500 | - | 170 | 122 | 4900 | 73 | - | - |
| ROSC10 / 44.9400 / -87.5200 | | -18.0000 | 68100 | 67700 | 1960 | - | - | 7900 | - | 125 | 176 | 40 | 176 | - | - |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (DU) - / LUNGITUDE / | * Mn * Fe * Al * Si * Ca * Ti * Co * Ni * Cu * Zn * | * P * K * RB * SR * Nd * Ag * Cd * Mg * V * Cr * | * Y * Sn * Te * Pb * La * In * Ga * Ge * Zr * Be * |
|--|---|--|--|
| 153 RUSS11 -87.68C0 | 44.9100 -18.0000 45400 285500 - 350 - | - 9300 - - 125 100 2600 - | - 38 - - 151 - |
| 153 RUSS12 -87.6800 | 44.91C0 -18.0000 45400 301000 - 150 - | - 15500 - - 151 125 1800 - | - 38 - 75 - |
| 153 RUSS13 -87.32C0 | 45.2300 -14.0000 11300 353900 - 340 - | - 8400 - - 99 172 2200 - | - 54 - 153 - |
| 153 RUSS14 -87.32C0 | 45.34C0 -23.0000 157600 199000 - 700 - | - 10400 - - 224 473 3100 - | - 50 - 338 - |
| 153 RUSS15 -87.2600 | 45.43C0 -23.0000 96800 237700 - 590 - | - 12100 - - 173 272 1900 - | - 49 - 252 - |
| 153 RUSS16 -87.3600 | 45.6100 -36.0000 99500 257100 - 600 - | - 10000 - - 224 323 3100 - | - 55 - 378 - |
| 153 RUSS18 -86.6500 | 45.5000 -33.0000 22700 306400 - 350 - | - 13300 - - 225 200 5400 - | - 75 - 501 - |
| 153 RUSS19 -86.78C0 | 45.41C0 -26.0000 19300 243600 - 1040 - | - 12600 - - 197 72 4400 - | - 59 - 256 - |
| 153 RUSS20 -87.0300 | 42.48C0 -19.0000 114200 251900 - 340 - | - 16400 - - 251 338 3400 - | - 53 - 309 - |
| 153 RUSS21 -87.0900 | 45.41C0 -26.0000 45500 321600 - 500 - | - 10000 - - 201 151 2200 - | - 38 - 243 - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (M) | FE | AL | SI | CA | Ti | CO | NI | CU | ZN |
|---|---------|----------|--------|--------|--------|----|-------|----|-----|
| P | K | SR | MO | AG | CD | MG | V | CR | |
| Y | SN | TE | PB | LA | GA | GE | LR | BE | |
| 153 RUSC22 -87.1800 | 45.3200 | -28.0000 | 129800 | 122900 | - | - | 14700 | - | 249 |
| 153 RUSC23 -87.1900 | 45.2300 | -32.0000 | 47400 | 102900 | - | - | 7700 | - | 149 |
| 153 RUSC24 -87.4200 | 44.5000 | -35.0000 | 38600 | 138000 | - | - | 28500 | - | 149 |
| 153 RUSC25 -85.3300 | 42.9000 | -10.0000 | 21700 | 117800 | - | - | 4800 | - | 200 |
| 153 RUSC26 -87.1600 | 42.2300 | - | 34200 | 112600 | - | - | 4500 | - | 178 |
| 153 RUSC27 -87.4200 | 44.9600 | -23.0000 | 137400 | 154200 | - | - | 15000 | - | 250 |
| 153 RUSC28 -85.1300 | 45.4100 | - | - | 21100 | 216700 | - | - | - | 123 |
| 153 RUSC29 -86.5200 | 45.4900 | -62.0000 | 56000 | 205900 | - | - | 18400 | - | 298 |
| 153 RUSC30 -86.4800 | 45.4600 | -47.0000 | 66200 | 169200 | - | - | 13500 | - | 250 |
| 153 RUSC31 -85.6200 | 45.4800 | -36.0000 | 13800 | 213100 | - | - | 3700 | - | 123 |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / NODULE CODE / LATITUDE / DEPTH / (DG) - (M) - | | * | MN | FE | AL | SI | CA | TI | CO | Ni | Cu | Zn | * | | |
|---|--------|------------------------|----------|---------|---------|----|----|----|-----|-----|-----|------|-------|------|---|
| / LATITUDE / | | * | P | K | RB | SR | MO | AG | CD | MG | V | CR | * | | |
| ----- | | * | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE | * | | |
| ***** | | * | * | * | * | * | * | * | * | * | * | * | ***** | | |
| 151 | H-T 01 | -46.00000 -66.00000 | -1.00000 | 3590000 | 1550000 | - | - | - | 220 | 338 | 13 | 1940 | - | | |
| 151 | H-T 02 | -46.00000 -66.00000 | -1.00000 | 3490000 | 2090000 | - | 25 | - | - | - | - | - | - | | |
| 151 | H-T 03 | -46.00000 -66.00000 | -1.00000 | 3490000 | 2090000 | - | 24 | - | 202 | 243 | 12 | 1575 | - | | |
| 151 | H-T 04 | -46.00000 -66.00000 | -1.00000 | 3370000 | 1860000 | - | 28 | - | - | 192 | 230 | 8 | 1500 | - | |
| 151 | H-T 05 | -46.00000 -66.00000 | -1.00000 | 3400000 | 1870000 | - | 26 | - | - | 192 | 215 | 10 | 1575 | - | |
| 151 | H-T 06 | -46.00000 -66.00000 | -1.00000 | 3340000 | 1930000 | - | 26 | - | - | 192 | 215 | 10 | 1340 | - | |
| 151 | H-T 07 | -46.00000 -66.00000 | -1.00000 | 3420000 | 1810000 | - | 25 | - | - | 192 | 215 | 10 | 1340 | - | |
| 151 | H-T 08 | -46.00000 -66.00000 | -1.00000 | 3240000 | 1780000 | - | 26 | - | - | 202 | 272 | 16 | 1650 | - | |
| 151 | H-T 09 | -46.00000 -66.00000 | -1.00000 | 3590000 | 1680000 | - | 28 | - | - | - | - | - | - | | |
| 151 | H-T 10 | -46.00000 -66.00000 | -1.00000 | 3360000 | 1460000 | - | 13 | - | - | - | 212 | 373 | 14 | 1875 | - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / | LATITUDE / | DEPTH / | MN | FE | AI | SI | CA | Tl | CO | NI | CU | V | ZN | * |
|----------------|-------------|---------------------|---------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| --(D)--- | -(M)- | -66.0000 | -1.0000 | 317000 | 142000 | - | - | - | - | - | - | - | - | * |
| / | LONGITUDE / | -66.0000 | -1.0000 | 317000 | 142000 | - | 28 | - | - | - | - | - | - | * |
| ----- | ----- | ----- | ----- | ----- | ----- | - | 29 | - | - | 192 | 238 | 10 | 1650 | * |
| * Y | * SN | * TE | * PB | * LA | * W | * GA | * GE | * ZR | * BE | * CR | * V | * Y | * CR | * |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 151 | H-T 11 | 46.0000 -66.0000 | -1.0000 | 317000 | 142000 | - | - | - | - | 183 | 238 | 11 | 1575 | * |
| 151 | H-T 12 | 46.0000 -66.0000 | -1.0000 | 317000 | 142000 | - | - | - | - | - | - | - | - | * |
| 151 | H-T 13 | 46.0000 -66.0000 | -1.0000 | 344000 | 163000 | - | - | - | - | - | - | - | - | * |
| 151 | H-T 14 | 46.0000 -66.0000 | -1.0000 | 322000 | 147000 | - | - | - | - | 202 | 316 | 13 | 1500 | * |
| 151 | H-T 15 | 45.0000 -65.3000 | -1.0000 | 255000 | 117000 | - | 19 | - | - | - | - | - | - | * |
| 151 | H-T 16 | 45.0000 -65.3000 | -1.0000 | 283000 | 200000 | - | 19 | - | - | 230 | 125 | 9 | 536 | * |
| 151 | H-T 17 | 45.0000 -65.3000 | -1.0000 | 281000 | 157000 | - | 19 | - | - | 230 | 149 | 8 | 500 | * |
| 151 | H-T 18 | 45.0000 -65.3000 | -1.0000 | 281000 | 157000 | - | 28 | - | - | 212 | 149 | 8 | 518 | * |
| 151 | H-T 19 | 45.0000 -65.3000 | -1.0000 | 265000 | 169000 | - | 10 | - | - | 220 | 149 | 8 | 536 | * |
| LAP 22 | - | - | - | 307000 | 39900 | 21700 | 40 | 63000 | 52800 | 2000 | 115 | 75 | 20 | 70 |
| | | | | 3800 | 10600 | - | 28 | 810 | 55 | - | 18100 | - | 60 | - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / -(DG)- | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * | |
|--|---|---|---|---------------------|
| / LATITUDE / | | | | |
| CAP 03 | - - - - - | 297000 38500 23800 635 58500 2200 125 80 15 50 | 3300 10000 40 - 35 - - - - - | 19300 - 50 - - |
| CAP 04 | - - - - - | 255600 55300 40 - 720 50 - - - - | 4400 - 30 - 55 - - - - | 115 60 - 20 - 50 - |
| CAP 05 | - - - - - | 263500 37100 35 - 675 45 - - - - | 3400 - 45 - 50 - - - - | 130 60 - 25 - 45 - |
| CAP 06 | - - - - - | 269200 38500 40 - 710 50 - - - - | 3200 - 20 - 60 - - - - | 120 70 - 20 - 40 - |
| CAP 07 | - - - - - | 357300 21000 26500 70000 15100 2200 190 90 25 45 | 1800 14300 50 - 1100 80 - - - - | 20500 - 60 - - |
| CAP 08 | - - - - - | 108700 164700 19100 73700 61000 3500 30 55 30 170 | 11500 7200 45 - 220 - - - - | 13900 - 60 - - |
| CAP 09 | - - - - - | 343800 29300 50 - 980 80 - - - - | 1700 - 18 - 20 - - - - | 150 110 - 15 - 60 - |
| CAP 10 | - - - - - | 238500 37100 35 - 800 30 - - - - | 3600 - 23 - 65 - - - - | 115 55 - 5 - 5 - |
| CAP 11 | - - - - - | 104500 176400 40 - 780 5 - - - - | 12000 - 60 - 260 - - - - | 45 45 70 - 60 - |
| CAP 12 | - - - - - | 174200 96700 50 - 630 10 - - - - | 7400 - 50 - 270 - - - - | 70 60 - 30 - 55 - |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (DG) - (M) - / LONGITUDE / | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
|--|---|---|-----------|--------|--------|--------|------|-------|-------|-------|------|----|----|----|-----|-----|-----|------|------|------|------|------|------|-----|-----|
| CAP 13 | - | - | - | - | 131800 | 128900 | - | 40 | 585 | - | - | - | - | 40 | 45 | 15 | 100 | - | - | - | - | - | - | | |
| CAP 14 | - | - | - | - | 131800 | 135900 | - | 40 | 600 | - | - | - | - | 30 | 35 | 20 | 60 | - | - | - | - | - | - | | |
| DEANO 1 | - | - | - | - | 142000 | 185000 | 8000 | 70000 | 10000 | 10000 | 5000 | 70 | 40 | 80 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | | |
| GUSW01 | - | - | -400.0000 | 132000 | 221000 | - | 1 | 25 | 10 | 1000 | 20 | 10 | 10 | 5 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | | |
| GUSW02 | - | - | -400.0000 | 132000 | 162000 | - | 15 | 80 | 20 | 1 | - | - | - | 1 | 10 | 2 | 10 | 5 | 10 | 5 | 10 | 5 | 10 | 5 | |
| GUSW03 | - | - | -400.0000 | 100000 | 115000 | - | 40 | 6000 | 100 | 10 | 2000 | 40 | 40 | 40 | 20 | 5 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | |
| GUSW04 | - | - | -400.0000 | 80000 | 111000 | - | 40 | 6000 | 30 | 1 | 4000 | 1 | 1 | 20 | - | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | |
| GUSW05 | - | - | -400.0000 | 70000 | 386000 | - | 10 | 40 | 10 | 1000 | 1 | 1 | 1 | - | 25 | 15 | 5 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| GUSW06 | - | - | -400.0000 | 290000 | 590000 | - | 5 | 200 | 30 | - | 5000 | 1 | 1 | 1 | - | 10 | 5 | 8 | 80 | 80 | 80 | 80 | 80 | 80 | |
| GUSW07 | - | - | -400.0000 | 230000 | 850000 | - | 100 | 60 | 1 | 6000 | 1 | 1 | 1 | - | 25 | 40 | 15 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NODULE CODE / | LATITUDE / DEPTH --(D ₀)-- / LONGITUDE / | MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | P * K * RB * SR * MO * AG * CC * MG * V * CR * | Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|------------------------------|--|---|--|---|
| GUS#08 | - - - - -40.0000 | 14000 29100 150 - 60 3000 30 - 20 10 300 | 1100 40 5 - 50 30 - 25 - 100 60 | 29000 - 1 - 1 - 1 - 1 - 100 5 |
| H-T 20 | - - - - -1.0000 | 157000 398000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| H-T 21 | - - - - -1.0000 | 157000 492000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| KINDO 1 | - - - - - | - 227989 155950 66149 59593 11578 - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| KINDO 2 | - - - - - | - 206378 101112 27200 128581 36449 - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| ROCA01 | - - - - - | - 18.0000 41895 512660 - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| ROCA02 | - - - - - | - 23.0000 171916 295146 - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| ROCA03 | - - - - - | - 14.0000 22922 288152 - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| ROCA04 | - - - - - | - 32.0000 69386 332214 - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| ROCA05 | - - - - - | - 23.0000 151C07 291649 - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(M)- | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * CR * V * GE * ZR * |
|--|---|------------------------|
| / LONITUDE / | * P * K * RB * SK * MO * AG * CD * MG * | * V * GE * |
| | * Y * SN * TE * PB * LA * W * GA * | * ZR * |
| RULAC6 | - - - - -25.0000 111513 326619 - - - - - | - - - - -0 - - - - |
| RULAC7 | - - - - -36.0000 88281 425234 - - - - - | - - - - -0 - - - - |
| RULAC8 | - - - - -35.0000 86732 255980 - - - - - | - - - - -0 - - - - |
| RULAC9 | - - - - -30.0000 6892 9371 - - - - - | - - - - -18010 - - - - |
| RULAC10 | - - - - -47.0000 51187 47489 - - - - - | - - - - -35949 - - - - |
| RULAC11 | - - - - -10.0000 21528 109805 - - - - - | - - - - -21083 - - - - |
| RULAC12 | - - - - -36.0000 21683 38257 - - - - - | - - - - -25729 - - - - |
| RULCO3 | - - - - -17.0000 48800 205200 - - - - - | - - - - -10000 - - - - |
| RULCO4 | - - - - -17.0000 82900 171700 - - - - - | - - - - -8600 - - - - |
| RULCO5 | - - - - -17.0000 165100 115300 - - - - - | - - - - -13100 - - - - |

| | * CO * NI * CU * ZN * | * CR * |
|--------|-----------------------|--------------------|
| | * V * GE * | * ZR * |
| RULCO3 | - - - - -0 - - - - | - - - - -0 - - - - |
| RULCO4 | - - - - -0 - - - - | - - - - -0 - - - - |
| RULCO5 | - - - - -0 - - - - | - - - - -0 - - - - |

CHEMICAL ANALYSES IN PPM .

| MARDSEN CODE / MODULE CODE / LATITUDE / DEPTH / -(D)--- | * Mn * Fe * Al * Si * Ca * Ti * Co * Ni * Cu * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * Sn * Te * Pb * La * W * Ga * GE * LR * BE * | | |
|---|---|---|---|----------------------|---------------------|
| / LUNGITUDE / --- | * | * | * | | |
| KUSC17 | - - - - -11.0000 | 10200 - 369100 | - - - - - 60000 | - - - - - 197 - 222 | 54 - 290 |
| SF 01 | - - - - - | - - - - - 25500 402000 | - - - - - - - - - | - - - - - 912 - 1530 | 1341 - - |
| SF 02 | - - - - - | - - - - - 22500 307000 | - - - - - - - - - | - - - - - 250 - 600 | 1433 - 734 |
| SF 03 | - - - - - | - - - - - 15000 380000 | - - - - - - - - - | - - - - - 180 - 590 | 2200 - 1126 |
| SF 04 | - - - - - | - - - - - 40000 355000 | - - - - - - - - - | - - - - - 90 - 480 | - - - - 790 - 500 |
| SF 05 | - - - - - | - - - - - 166500 188000 | - - - - - - - - - | - - - - - 223 - 777 | - - - - 939 - 1192 |
| SF 06 | - - - - - | - - - - - 40000 437000 | - - - - - - - - - | - - - - - 340 - 775 | - - - - 1369 - 1254 |
| SF 07 | - - - - - | - - - - - 12500 278000 | - - - - - - - - - | - - - - - 109 - 783 | - - - - 938 - 2098 |
| TWN01 | - - - - - | - - - - - 20.0000 | - - - - - 1900 - 167800 | - - - - - - - - - | - - - - - - - - - |
| TWN02 | - - - - - | - - - - - 20.0000 | - - - - - 305700 - 167300 | - - - - - - - - - | - - - - - - - - - |

MARINE DATA

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / -(DG) - | MN | FE | AL | SI | CA | Tl | CO | NI | CU | ZN |
|---|----|----|----|----|----|----|----|----|----|----|
| / LUNGITUD E / | P | K | RB | SR | MO | AG | CD | MG | V | CR |
| ----- | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE |
| ----- | * | * | * | * | * | * | * | * | * | * |

| TMMNO 3 | - | - | -20.000 | 122100 1000 | 115600 | - | - | - | - | - |
|---------|---|---|---------|----------------|--------|---|---|---|---|---|
| TMMNO 4 | - | - | -26.000 | 123300 | 131900 | - | - | - | - | - |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / NOUVELLE CUME / LATITUDE / DEPTH / -(DG)--- / -(M)--- | | MN | FE | AL | SI | CA | Tl | CO | NI | CU | ZN |
|---|--------|-----------------------|------------|----------------------|------------------|-------|------------------------|----------------------|-----------|-----------------|--------------------|
| ----- / LONGITUDE / ----- | | P | K | RB | SR | MU | AG | CD | MG | V | CR |
| ----- | | Y | SN | TE | PB | LA | N | GA | GE | ZR | BE |
| 534 | MER127 | -63.0570 178.4830 | -3583.0000 | 80000 | 124000 | 39160 | 152644 1100 1400 | 17900 50 | 4600 - | 1400 - | 2700 - |
| 532 | MER128 | -64.1830 -165.9330 | -2932.9000 | 148000 | 110000 | 24343 | 113578 1000 1500 | 15200 110 1500 | 6300 - | 1700 - | 7000 - |
| 532 | MER129 | -64.1830 -165.9330 | -2932.0000 | 142000 | 108000 | 24872 | 129937 1000 - | 14400 120 1500 | 5800 - | 1500 - | 6800 - |
| 532 | WIL123 | -60.0000 -160.0000 | - | 122100 1091 90 | 140400 | - | 122458 788 848 | 12300 234 - | - | 1520 17 - | 2550 - |
| 523 | LAM167 | -60.1330 -74.9160 | - | 630000 | 109000 | - | - | - | - | 1100 - | 1200 - |
| 501 | OSFA01 | -56.4500 140.0600 | -3750.0000 | 169980 | 122000 149000 | 34000 | 160000 800 900 | 20726 500 | 6900 - | 900 - | 4800 9649 - |
| 501 | OSFA02 | -56.4500 140.0600 | -3750.0000 | 421224 | 16785 | 1587 | 4673 - | 28587 - | - | - | 3000 18696 - |
| 501 | OSFA03 | -56.4500 140.0600 | -3750.0000 | 178195 | 349699 | 10054 | 64968 - | 15008 - | - | - | 36000 7840 - |
| 501 | OSFA04 | -56.4500 140.0600 | -3750.0000 | 447384 | 48258 | 5291 | 8413 - | 20726 - | - | - | 4000 21711 - |
| 501 | OSFA05 | -56.4500 140.0600 | -3750.0000 | - | - | - | - | - | - | - | 4000 40000 - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN ppm.

| MARSDEN CODE / NOUVELLE CÔTE / LATITUDE / DEPTH / DEPTH ---(m)--- | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZK * BE * |
|--|---|--|---|
| 495 GLAS02 -150.0500 | -55.1600 -3d65.0000 18C512 108896 | - | - |
| 495 GLAS03 -150.0500 | -55.1600 -3d65.0000 154415 134704 | - | - |
| 494 GRANO6 -142.6660 | -52.1660 -2203.0000 222000 186000 | - | - |
| 493 LAM113 -132.8160 | -59.3660 -3975.0000 28000 66000 | - | - |
| 493 LAM114 -133.6830 | -51.2160 -4663.0000 152000 135000 | - | - |
| 492 GRANO5 -125.3500 | -57.0830 -3877.0000 179000 199000 | - | - |
| 491 GRANO2 -114.8160 | -54.9150 -3840.0000 152000 286000 | - | - |
| 491 GRANO3 -114.9660 | -57.7330 -4223.0000 160000 255000 | - | - |
| 491 GRANO4 -114.9660 | -57.7330 -4223.0000 199000 262000 | - | - |
| 490 GRANO1 -104.9650 | -59.1500 -4662.0000 11000 86000 | - | - |

CHEMICAL ANALYSES IN PPM

CHEMICAL ANALYSES IN PPM.

| MADSSEN CODE / MODULE CODE / LATITUDE / DEPTH | | | | | | | | | | MADSSEN CODE / MODULE CODE / LATITUDE / DEPTH | | | | | | | | | |
|---|--------|----------|------------|--------|--------------|--------|---------|---|---|---|---|---------|---|---|--------------|-------|---------|------|------|
| --(Dg)-- | | | | | --(M)-- | | | | | --(Dg)-- | | | | | --(M)-- | | | | |
| / LATITUDE / | | / DEPTH | | | / LATITUDE / | | / DEPTH | | | / LATITUDE / | | / DEPTH | | | / LATITUDE / | | / DEPTH | | |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 485 | GRAN10 | -55.1000 | -2872.0000 | 108000 | - | 275000 | - | - | - | - | - | - | - | - | 4300 | 1200 | 900 | - | - |
| 485 | GRAN11 | -55.1000 | -2872.0000 | 200000 | - | 199000 | - | - | - | - | - | - | - | - | 1900 | 9200 | 1200 | - | - |
| 485 | GRAN12 | -55.1000 | -2872.0000 | 189000 | - | 199000 | - | - | - | - | - | - | - | - | 2600 | 11000 | 2300 | - | - |
| 485 | GRAN13 | -55.0830 | -4144.0000 | 86000 | 179000 | - | - | - | - | - | - | - | - | - | 2100 | 6300 | 1600 | - | - |
| 485 | GRAN14 | -55.0830 | -4144.0000 | 23000 | - | 201000 | - | - | - | - | - | - | - | - | 2000 | 1800 | 1200 | - | - |
| 485 | GRAN15 | -55.0830 | -3960.0000 | 23000 | 189000 | - | - | - | - | - | - | - | - | - | 1600 | 3400 | 1600 | - | - |
| 485 | GRAN16 | -55.0830 | -3960.0000 | 11000 | - | 161000 | - | - | - | - | - | - | - | - | 1400 | 3200 | 1800 | - | - |
| 485 | GRAN17 | -55.0830 | -3960.0000 | 11000 | 182000 | - | - | - | - | - | - | - | - | - | 1600 | 1400 | 1700 | - | - |
| 485 | LAM162 | -55.0900 | -3131.0000 | 104000 | 190000 | - | - | - | - | - | - | - | - | - | 13000 | - | - | 2500 | 2700 |
| 485 | LAM163 | -54.8830 | -2316.0000 | 108000 | 108000 | - | - | - | - | - | - | - | - | - | 42000 | - | - | 1900 | 5200 |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM .

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH | | MN | FE | AL | SI | CA | TI | CO | NI | CU | ZN |
|---|--------|-----------|------------|---------|--------|-------|-------|-------|------|-------|-------|
| --(DC)--- / (MI)--- | | * | * | * | * | * | * | * | * | * | * |
| / LONGITUDE / | | P | K | RB | SR | MO | AG | CD | MG | V | CR |
| | | * | * | * | * | * | * | * | * | * | * |
| | | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE |
| | | * | * | * | * | * | * | * | * | * | * |
| 462 | SUMMC4 | -49.9833 | -1335.0000 | 1630000 | 100000 | 8000 | 15000 | 20000 | 9000 | 2500 | 5000 |
| | | 177.5333 | | 400000 | - | - | 1000 | 500 | - | - | 10000 |
| 462 | WL124 | -49.6660 | -2290.0000 | 122400 | 129900 | - | 64033 | 65500 | - | 3550 | 3410 |
| | | 179.8840 | | 199180 | 0 | - | 0 | - | - | 0 | 900 |
| 459 | LAM110 | -43.7000 | -5293.0000 | 176000 | 66000 | - | - | - | - | 1700 | 7600 |
| | | -151.2830 | | - | - | - | - | - | - | - | 5200 |
| 459 | LAM111 | -46.9530 | -4308.0000 | 186000 | 206000 | - | - | 17000 | - | 300 | 3600 |
| | | -154.2500 | | - | - | - | - | - | - | - | 1500 |
| 458 | LAM108 | -43.4160 | -4314.0000 | 172000 | 120000 | - | - | 23000 | - | 3300 | 7400 |
| | | -141.2d30 | | - | - | - | - | - | - | - | 2700 |
| 458 | LAM109 | -45.8830 | -4738.0000 | 173000 | 11000 | - | - | 11000 | - | 180 | 11000 |
| | | -149.7500 | | - | - | - | - | - | - | - | 3500 |
| 457 | MER115 | -40.6000 | -5120.0000 | 186000 | 103000 | 27518 | 67772 | 12100 | 5700 | 4300 | 8900 |
| | | -132.8170 | | - | - | - | 800 | 350 | - | - | - |
| 457 | MER116 | -40.6000 | -5120.0000 | 216000 | 81000 | 23813 | 59359 | 13100 | 4700 | 4000 | 9000 |
| | | -132.8170 | | - | - | - | 730 | 410 | - | - | - |
| 457 | MGH 45 | -40.6000 | -5120.0000 | 228000 | 147000 | 32000 | 49000 | 14000 | 8000 | 3800 | 13000 |
| | | -132.8160 | | 7000 | 150 | - | 710 | 610 | - | 19000 | 6900 |
| 456 | CRUNZ1 | -44.3840 | -4200.0000 | 204100 | 54300 | - | - | 1600 | 110 | 7 | 600 |
| | | -124.6500 | | - | - | - | 1400 | - | - | - | 650 |
| | | - | - | - | - | - | 91 | 180 | - | - | - |
| | | - | - | - | - | - | 91 | - | - | - | - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / DEPTH / DEPTH | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * H * GA * GE * LR * BE * |
|--|---|--|---|
| --(D)--- / LATITUDE / | * 117000 - 62000 33339 69175 15100 10400 3900 8000 3700 830 | - 20000 - 3400 - - - | - - - - - |
| 456 MER117 -129.10000 -41400.0000 196000 117000 33339 69175 15100 10400 3900 8000 3700 830 | - - - - - | - - - - - | - - - - - |
| 456 MER118 -125.83330 -4260.0000 226000 91000 20638 48142 15300 5400 4000 11000 4500 930 | - - - - - | - 1600 - 330 - - | - - - - - |
| 456 MER119 -125.38330 -4340.0000 201000 64000 30164 99556 14800 3100 2500 11400 6200 900 | - - - - - | - 740 - 290 - - | - - - - - |
| 456 MER120 -123.01600 -4100.0000 162000 96000 40219 96751 14700 6900 2300 8600 4600 830 | - - - - - | - 620 - 360 - - | - - - - - |
| 456 MUH30 -123.01600 -4100.0000 76000 119000 50000 196000 34000 12000 700 2900 2200 400 | - - - - - | - 550 - 50 - - | - - - - - |
| 456 MUH40 -129.10000 -4880.0000 209000 140000 30000 117000 18000 9000 3600 11000 4200 440 | - 7000 - 760 - 380 - | - 1200 - 710 - 7 - | - 19000 12000 460 590 - |
| 456 MUH47 -128.25000 -4750.0000 246000 140000 28000 49000 16000 10000 3600 15000 4300 510 | - 130 - 6000 - - | - 690 - 590 - - | - 16000 16000 1000 - |
| 456 MUH48 -125.83330 -4260.0000 329000 105000 20000 51000 20000 5300 3600 14000 5400 400 | - 110 - 6000 - | - 640 - 630 - | - 20000 20000 600 - |
| 456 MUH57 -127.33330 -4330.0000 152000 112000 44000 163000 18000 7000 2000 4500 2400 400 | - 8000 - 110 - | - 1000 - 110 - | - - - - - |
| 454 UKUNZ3 -102.33330 -4240.0000 227200 103400 - - - - | - - - - - | - - - - - | - 2180 - 1350 19670 5080 - |
| | - - - - - | - - - - - | - 400 - 240 - - |
| | - - - - - | - - - - - | - - - - - |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / MODULE CODE / | LATITUDE / DEPTH | FE | AL | SI | CA | Tl | CO | NI | CU | ZN |
|------------------------------|------------------|-----------------------|------------|---------------|----------------|--------------|---------------|--------------|-----------|------------|
| ---(Dg)--- / LUNGITUDE / | -1(M)- | * | * | * | * | * | * | * | * | * |
| ----- | ----- | P | K | RB | SR | MU | AG | CD | MG | V |
| ----- | ----- | * | * | * | * | * | * | * | * | CR |
| ----- | ----- | Y | SN | TE | PB | LA | W | GA | GE | ZR |
| ----- | ----- | * | * | * | * | * | * | * | * | BE |
| ----- | ----- | * | * | * | * | * | * | * | * | * |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 454 | MER121 | -41.9833 -102.0160 | -4200.0000 | 245000 970 | 96000 6700 | 30164 - | 51881 890 | 15700 540 | 3700 - | 10200 - |
| 454 | MER122 | -44.1330 -100.9670 | -4100.0000 | 195000 - | 99000 - | 16934 - | 41131 500 | 15000 310 | 3500 - | 1000 - |
| 454 | MUL49 | -44.1330 -100.9660 | -4100.0000 | 291000 67 | 25000 - | 61000 800 | 22000 470 | 52000 - | 1500 - | 6700 - |
| 454 | AGH54 | -41.9830 -102.0166 | -4200.0000 | 221000 170 | 182000 6000 | 28000 - | 84000 1000 | 16000 370 | 4800 - | 10000 7 |
| 452 | MER123 | -42.7170 -82.1830 | -2150.0000 | 129000 - | 194000 2000 | 14817 - | 55153 1200 | 17000 400 | 4000 - | 9000 7 |
| 452 | MGH20 | -42.7160 -83.1830 | -2650.0000 | 177000 270 | 266000 3000 | 21000 - | 75000 430 | 23000 150 | 800 - | 1100 - |
| 449 | LAM159 | -47.9330 -57.1600 | -2620.0000 | 230000 - | 180000 - | - | - | - | - | 11000 - |
| 448 | MER155 | -49.3500 -47.7500 | -4980.0000 | 127000 - | 120000 - | 40219 - | 157981 840 | 12200 150 | 2900 - | 4600 - |
| 448 | MULC4 | -49.3500 -47.7500 | -5055.0000 | - | 112000 - | - | 137000 - | 420 - | 3200 - | 580 - |
| 447 | LAM158 | -48.2660 -30.0060 | -5185.0000 | 97000 - | 111000 - | - | - | - | 500 - | 2800 - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / | LATITUDE / | DEPTH / | FE * MN * K * | AL * SI * | CA * SR * | Ti * | CG * | NI * | CU * | ZN * |
|------------------------------|---------------------|-------------|---------------|-----------|-----------|--------|-------|-------|-------|-------|
| --(06)-- / | -1(M)- | - | * | * | * | * | * | * | * | * |
| LONGITUDE / | | | P * K * | RB * SR * | MU * | A6 * | CC * | MG * | V * | CR * |
| ----- | | | * | * | * | * | * | * | * | * |
| | | | Y * SN * | TE * PB * | LA * | W * | GA * | GE * | ZR * | BE * |
| | | | * | * | * | * | * | * | * | * |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 443 LAM140 | -37.9160 8.9330 | -1185.0000 | 164000 | 137000 | - | - | - | 1500 | 6400 | 2100 |
| 443 LAM141 | -31.1830 8.7660 | -4768.0000 | 120000 | 60000 | - | - | - | - | - | - |
| 443 LAM142 | -32.0830 8.3660 | -4325.0000 | 220000 | 68000 | - | 150000 | - | 13000 | 13000 | 5000 |
| 443 LAM143 | -35.9660 7.0660 | -5039.0000 | 157000 | 97000 | - | - | - | - | - | - |
| 443 LAM144 | -32.3330 2.1660 | -2047.0000 | 170000 | 160000 | - | - | - | 1700 | 11800 | 2900 |
| 443 LAM145 | -32.3500 2.1160 | -1675.0000 | 170000 | 180000 | - | - | - | 8400 | 5600 | 1000 |
| 443 LAM146 | -31.4830 1.0330 | -3043.0000 | 130000 | 180000 | - | - | - | 8400 | 3600 | 300 |
| 443 LAM147 | -31.4500 0.9500 | -4136.0000 | 180000 | 158000 | - | 21000 | - | 4800 | 2800 | 700 |
| 442 LAM136 | -37.5500 18.1000 | -11796.0000 | 160000 | 145000 | - | - | - | 2200 | 3800 | 2000 |
| 442 LAM137 | -37.5500 18.1000 | -3147.0000 | 105000 | 172000 | - | - | - | 4600 | 3100 | 500 |

CHEMICAL ANALYSES IN PPM

| * | MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(UG) - / LONGITUDE / | * | FE | AL | SI | CA | Tl | CO | Nl | CU | * | * | ZN | * |
|-----|---|----------|------------|--------|--------|-------|-------|----|------|-------|-------|------|----|---|
| 442 | LAM138 | -38.9500 | -4854.0000 | 186000 | 140000 | - | - | - | - | 1600 | 7200 | 1800 | - | - |
| 442 | LAM139 | -36.2160 | -4583.0000 | 69000 | 133000 | - | - | - | - | 1100 | 2500 | 1000 | - | - |
| 442 | W-A 01 | -34.6000 | -2740.0000 | 268000 | 174000 | - | 17700 | - | 2600 | 6800 | 800 | 1318 | - | - |
| 442 | W-A 02 | -34.7000 | -3200.0000 | 269000 | 141000 | - | 20000 | - | 2900 | 8800 | 1000 | 1101 | - | - |
| 442 | W-A 20 | -36.1670 | -4580.0000 | 214000 | 105000 | - | 14200 | - | 1800 | 10200 | 2600 | 707 | - | - |
| 442 | W-A 21 | -38.1670 | -4580.0000 | 182000 | 102000 | - | 1040 | - | 10 | - | - | - | - | - |
| 442 | WILL01 | -34.7000 | -3200.0000 | 1100 | 247400 | - | 13600 | - | 1700 | 7900 | 3100 | 680 | - | - |
| 442 | WILL01 | -34.6000 | -2743.0000 | 84000 | - | 11217 | 1300 | - | 80 | 240 | 50 | 89 | - | - |
| 441 | LAM133 | -37.0500 | -3290.0000 | 161000 | 220000 | - | - | - | 0 | - | - | 11 | - | - |
| 441 | LAM134 | -39.0830 | -4517.0000 | 120000 | 100000 | - | - | - | - | 2800 | 12200 | 1800 | - | - |
| | | | | | | | | | | 1900 | 7800 | 1600 | - | - |

CHEMICAL ANALYSES IN PPM

| MARDEN CODE / NODULE CODE / LATITUDE / DEPTH / (DG)--- / LATITUDE / DEPTH / (DG)--- | | Mn | Fe | Al | Si | Ca | Ti | Co | Ni | Cu | Zn |
|---|---------|---------------------|--------------------------|-----------------------|---------------|-----------------------|---------------|------|-----------|------------|-------------|
| / LATITUDE / DEPTH / (DG)--- | | * P | * K | * RB | * SR | * MG | * AG | * CD | * MG | * V | * CR |
| * Y | | * SN | * TE | * PB | * LA | * m | * GA | * GE | * LR | * BE | * |
| ***** | | * * | * * | * * | * * | * * | * * | * * | * * | * * | ***** |
| 441 | LAM135 | -38.9000 21.4560 | -5176.0000 - | 140000 - | - | - | - | - | 1700 - | 5600 - | 1500 - |
| 441 | SUMIC 1 | -32.4340 22.3770 | -170.0000 41059 51 | 136000 - | 76000 - | 10750 2804 745 | 167239 259 | - | 1610 - | 6630 - | 230 740 |
| 441 | SUMIC 2 | -35.9160 22.3770 | -230.0000 48047 50 | 112000 - | 49000 - | 17293 2041 300 | 192254 237 | - | 1410 - | 5710 - | 137 101 |
| 441 | SUMIC 3 | -35.7830 22.3830 | -1070.0000 141 | 158000 17908 - | 184000 141 | 48609 1200 713 | 52887 433 | - | 3730 - | 5820 - | 310 1010 |
| 441 | SUMIC 4 | -32.3330 22.0430 | 220.0000 60 | 1C9000 41059 60 | 90000 - | 322250 1564 533 | 165095 182 | - | 1790 - | 4240 - | 290 236 |
| 441 | n-A 19 | -36.6330 26.1330 | -2360.0000 - | 118000 - | 197000 2 | - | 11500 1232 | - | - | - | 167 - |
| 441 | n-A 22 | -37.7820 25.0570 | -3040.0000 - | 272000 - | 122000 3 | - | 21700 2097 | - | - | 3200 13 | 12700 - |
| 440 | n-A 06 | -33.6170 34.8170 | -1280.0000 - | 56300 - | 45700 2 | - | 162000 932 | - | - | 2400 3 | 4300 - |
| 440 | n-A 07 | -33.0170 34.8170 | -1280.0000 - | 74300 - | 12700 1 | - | 153000 310 | - | - | 900 3 | 4600 - |
| 440 | n-A 08 | -32.6170 34.8170 | -1280.0000 - | 62700 1 | 18400 - | - | 167000 315 | - | - | 1300 3 | 5900 - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH ---(deg)--- / LUNGITUDE / | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|---|--|--|--|
| 440 W-A 09 -33.0170 -1280.0000 98600 56800 - - 14000 - 4200 5900 1300 488 - | - - 2 - 890 - - 18700 - 4100 5500 1300 527 - | - - 1 - 2012 - - 11300 - 3 - - 1100 - | - - 1 - 1287 - - 8500 - 200 300 800 290 - |
| 440 W-A 23 -33.7330 -1280.0000 207000 177000 - - 1 - 18700 - 4100 5500 1300 527 - | - - 1 - 2012 - - 11300 - 3 - - 1100 - | - - 1 - 1287 - - 8500 - 200 300 800 290 - | - - 1 - 1287 - - 8500 - 200 300 800 290 - |
| 440 W-A 24 -33.4670 -12140.0000 357000 - - 1 - 1 - 11300 - 3 - - 1100 - | - - 1 - 2012 - - 11300 - 3 - - 1100 - | - - 1 - 1287 - - 8500 - 200 300 800 290 - | - - 1 - 1287 - - 8500 - 200 300 800 290 - |
| 440 W-A 25 -33.4670 -12140.0000 14600 295000 - - 1 - 1287 - - 11300 - 3 - - 1100 - | - - 1 - 2012 - - 11300 - 3 - - 1100 - | - - 1 - 1287 - - 8500 - 200 300 800 290 - | - - 1 - 1287 - - 8500 - 200 300 800 290 - |
| 440 WILIC 2 -33.0660 -1280.0000 87400 133000 - - 0 - 61229 99900 - 3270 3830 1020 578 - | - - 0 - 29047 - - 0 - 61229 99900 - 3270 3830 1020 578 - | - - 0 - 1134 35 - 0 - 61229 99900 - 3270 3830 1020 578 - | - - 0 - 1134 35 - 0 - 61229 99900 - 3270 3830 1020 578 - |
| 440 WILIC 3 -33.0660 -1280.0000 15700 58269 - - 301 - 22902 156700 - 540 1630 250 171 - | - - 0 - 29041 - - 0 - 22902 156700 - 540 1630 250 171 - | - - 0 - 1134 35 - 0 - 22902 156700 - 540 1630 250 171 - | - - 0 - 1134 35 - 0 - 22902 156700 - 540 1630 250 171 - |
| 440 WILIC 4 -33.0660 -1280.0000 22300 56041 - 377 - 39261 162400 - 540 2620 380 240 - | - - 0 - 56041 - - 0 - 39261 162400 - 540 2620 380 240 - | - - 0 - 1134 35 - 0 - 39261 162400 - 540 2620 380 240 - | - - 0 - 1134 35 - 0 - 39261 162400 - 540 2620 380 240 - |
| 440 WILIC 5 -32.9160 -1250.0000 152400 16511 - 510 - 33185 54600 - 5290 6450 1250 692 - | - - 0 - 16511 - - 0 - 33185 54600 - 5290 6450 1250 692 - | - - 0 - 1166 193 - 17 - 1610 5920 830 752 - | - - 0 - 1166 193 - 17 - 1610 5920 830 752 - |
| 440 WILIC 7 -32.9160 -1250.0000 88200 27998 - 330 - 25706 91100 - 1610 5920 830 752 - | - - 0 - 27998 - - 0 - 25706 91100 - 1610 5920 830 752 - | - - 0 - 1166 193 - 17 - 1610 5920 830 752 - | - - 0 - 27998 - - 0 - 25706 91100 - 1610 5920 830 752 - |
| 440 WILIC 8 -32.9160 -1250.0000 34300 55735 - 188 - 32250 159600 - 230 2480 420 101 - | - - 0 - 55735 - - 0 - 32250 159600 - 230 2480 420 101 - | - - 0 - 1040 16 - 5 - 230 2480 420 101 - | - - 0 - 55735 - - 0 - 32250 159600 - 230 2480 420 101 - |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / NODULE CODE / | LATITUDE / DEPTH | DEPTH / (DG) - (M) - | FE * MN * | AL * K * | SI * RB * | CA * SR * | TI * MD * | CO * AG * | NI * CD * | CU * MG * | V * GE * | ZN * CR * | BE * |
|------------------------------|----------------------------|----------------------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|------|
| / LUNITUDE / | | | * | * | * | * | * | * | * | * | * | * | * |
| 440 WILI09 | -32° 91' 60" - 35° 49' 00" | 1250.0000 | 111300 | 55200 | - | 37391 | 93300 | - | 1740 | 6470 | 1250 | 748 | - |
| 440 WILI10 | -32° 91' 60" - 35° 49' 00" | 1250.0000 | 191300 | 154900 | - | 16358 | 18900 | - | 7740 | 3180 | 480 | 570 | - |
| 440 WILI16 | -35° 85' 00" - 36° 76' 60" | 12450.0000 | 152500 | 117000 | - | 99556 | 8800 | - | 1630 | 5230 | 2520 | 656 | - |
| 440 WILI17 | -32° 85' 00" - 36° 76' 60" | 12450.0000 | 157400 | 106600 | - | 113110 | 8700 | - | 1350 | 6500 | 2950 | 702 | - |
| 440 WILI18 | -31° 90' 00" - 34° 35' 00" | 12700.0000 | 162100 | 151900 | - | 44402 | 1370 | - | 6150 | 3460 | 1000 | 670 | - |
| 437 CR0107 | -31° 03' 33" - 64° 86' 60" | 14805.0000 | 132700 | 160700 | - | 11198 | 486 | - | 18 | - | - | 496 | - |
| 437 CR0108 | -31° 03' 33" - 64° 86' 60" | 14805.0000 | 123600 | 159700 | - | 1831 | - | - | - | - | - | - | - |
| 437 CR0111 | -39° 76' 70" - 64.0000 | 14980.0000 | 125100 | 80000 | - | - | 11180 | 9480 | - | 4470 | 4850 | 2190 | 14 |
| 436 BEAN02 | -30° 00' 00" - 71.0000 | - | 117260 | 220660 | - | - | 150 | - | - | - | - | - | - |
| 436 MER159 | -30° 63' 30" - 70.1170 | 3958.0000 | 119000 | 192000 | - | - | 120 | - | - | - | - | - | - |

CHEMICAL ANALYSES IN PPM *

| MARDEN CODE / NODULE CODE / LATITUDE / DEPTH ---(DG)--- / LONGITUDE / | MATERIAL CODE / DEPTH / LATITUDE / DEPTH ---(M)--- / LONGITUDE / | MATERIAL CODE / DEPTH / LATITUDE / DEPTH ---(M)--- / LONGITUDE / | CHEMICAL ANALYSES IN PPM * | | | | | | | | | | | |
|--|---|---|---|--|--|--|--|--|--|--|--|--|--|--|
| | | | MN * FE * AL * SI * CA * TI * CU * NI * CU * ZN * P * K * RB * SR * MU * AG * CD * MG * V * CR * Y * SN * TE * PB * LA * b * GA * GE * LR * BE * * | | | | | | | | | | | |
| 433 BEAN08 | -32.0000 104.0000 | -32.0000 103.8670 | 171560 123723 11748 - 89600 16009 - 5155 1415 51C7 2715 - 2533 - - - - 333 - 71 - 12604 392 - | | | | | | | | | | | |
| 433 CRU122 | -32.8000 103.8670 | -32.0000 103.3660 | 145100 129200 - - - 160 - 380 - 4880 2440 4880 3010 - - - - - - - - - - - - - | | | | | | | | | | | |
| 433 LAM107 | -32.5330 124.5000 | -32.450.0000 125.000 | - - - - - - - - - - - - | | | | | | | | | | | |
| 431 LAM106 | -37.8330 124.5000 | -56.07.0000 185000 | 117000 - - - - 6000 - 2000 - 3200 1800 - - - - - - - - - - - - - | | | | | | | | | | | |
| 431 MER150 | -37.8330 124.5000 | -59.18.0000 184000 | 103000 - 39689 118252 10400 2500 1500 9000 12500 6000 4500 650 - - - - - 640 230 - - - - - - | | | | | | | | | | | |
| 428 W-A 28 | -39.7500 159.6500 | -4800.0000 262000 | 81900 - - - 10000 - 23600 - 1900 12500 6000 1083 - - - - - 843 - - - - - - | | | | | | | | | | | |
| 428 W-A 29 | -39.7500 159.6500 | -4800.0000 273000 | 73300 - - - 1 - 15900 - 14 - 14 - 14 - - | | | | | | | | | | | |
| 425 W-A 30 | -35.3500 -178.5170 | -4840.0000 205000 | 204000 - - - 2 - 1777 - 19000 - 13000 - 13000 - 1130 - - - - - 665 - - - - - - | | | | | | | | | | | |
| 425 W-A 31 | -32.8500 -178.5170 | -4840.0000 142000 | 159000 - - - 1 - 983 - 13100 - 3200 1900 - 700 323 - - - - - 2 - - - - - - | | | | | | | | | | | |
| 424 LAM105 | -30.2660 -164.3330 | -4896.0000 790000 | 107000 - - - - - - - - - - - - | | | | | | | | | | | |

CHEMICAL ANALYSES IN PPM -

 MARSDEN CODE / NODDLE CODE / LATITUDE / DEPTH
 ---(M)--- / LITUDE /

| | MN | FE | AL | SI | CA | TI | CO | NI | CU | ZN |
|-----|--------|-----------|------------|--------|--------|-------|--------|-------|------|------|
| P | K | RB | SR | MU | AG | CD | MG | V | CR | * |
| Y | SN | TE | PB | LA | W | GA | GE | ZR | BE | * |
| 424 | MEKIC3 | -35.8330 | -4950.0000 | 178000 | 52000 | 59799 | 118719 | 9400 | 2400 | 2000 |
| | | -163.0160 | | - | - | - | 550 | 190 | - | - |
| | | | | - | - | - | 1000 | - | - | - |
| 424 | MEKIC4 | -35.8330 | -4950.0000 | 141000 | 171000 | 26459 | 74783 | 13400 | 6800 | 3500 |
| | | -163.0160 | | - | - | - | 1000 | 220 | - | - |
| | | | | - | - | - | 1900 | - | - | - |
| 423 | LAM104 | -39.5000 | -4826.0000 | 159000 | 63000 | - | - | - | - | 3000 |
| | | -157.7500 | | - | - | - | - | - | - | 1300 |
| | | | | - | - | - | - | - | - | - |
| 422 | MEKIC7 | -31.2170 | -4280.0000 | 143000 | 182000 | 13759 | 32250 | 15000 | 9000 | 2900 |
| | | -141.2060 | | - | - | - | 1000 | 350 | - | - |
| | | | | - | - | - | 690 | - | - | - |
| 421 | CKUN17 | -31.0840 | -4665.0000 | 166200 | 103600 | - | - | - | - | 1500 |
| | | -131.2540 | | - | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - | - |
| 421 | CKUN19 | -36.3840 | -4880.0000 | 168100 | 131300 | - | - | - | - | 7200 |
| | | -137.2500 | | - | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - | - |
| 421 | CKUN22 | -32.1840 | -4700.0000 | 195600 | 141600 | - | - | - | - | 3800 |
| | | -135.5340 | | - | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - | - |
| 421 | MEKIC5 | -34.0170 | -4721.0000 | 196000 | 217000 | 28576 | 75251 | 22000 | 1400 | 4500 |
| | | -138.9170 | | - | - | - | 3000 | 370 | - | - |
| | | | | - | - | - | 1100 | - | - | - |
| 421 | MEKIC6 | -36.5500 | -4700.0000 | 141000 | 124000 | 32810 | 87871 | 14400 | 5700 | 3600 |
| | | -137.4000 | | - | - | - | 880 | 230 | - | - |
| | | | | - | - | - | 1400 | - | - | - |
| 421 | MEKIC7 | -36.5500 | -4720.0000 | 181000 | 105000 | 29635 | 72446 | 11800 | 4800 | 3400 |
| | | -137.4000 | | - | - | - | 790 | 280 | - | - |
| | | | | - | - | - | 1400 | - | - | - |

| | NI | CO | TI | CA | SI | FE | MN | ZN | * | |
|-----|---------|-----------|------------|--------|--------|-------|--------|-------|------|------|
| P | K | RB | SR | MU | AG | CD | CD | CR | * | |
| Y | SN | TE | PB | LA | W | GA | GE | ZR | BE | |
| 420 | MEKIC8 | -35.8330 | -4950.0000 | 178000 | 52000 | 59799 | 118719 | 9400 | 2400 | |
| | | -163.0160 | | - | - | - | 550 | 190 | - | |
| | | | | - | - | - | 1000 | - | - | |
| 420 | MEKIC9 | -35.8330 | -4950.0000 | 141000 | 171000 | 26459 | 74783 | 13400 | 6800 | 3500 |
| | | -163.0160 | | - | - | - | 1000 | 220 | - | - |
| | | | | - | - | - | 1900 | - | - | - |
| 420 | MEKIC10 | -39.5000 | -4826.0000 | 159000 | 63000 | - | - | - | - | 3000 |
| | | -157.7500 | | - | - | - | - | - | - | 1300 |
| | | | | - | - | - | - | - | - | - |
| 420 | MEKIC11 | -31.2170 | -4280.0000 | 143000 | 182000 | 13759 | 32250 | 15000 | 9000 | 2900 |
| | | -141.2060 | | - | - | - | 1000 | 350 | - | - |
| | | | | - | - | - | 690 | - | - | - |
| 420 | MEKIC12 | -31.0840 | -4665.0000 | 166200 | 103600 | - | - | - | - | 1500 |
| | | -131.2540 | | - | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - | - |
| 420 | MEKIC13 | -36.3840 | -4880.0000 | 168100 | 131300 | - | - | - | - | 7200 |
| | | -137.2500 | | - | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - | - |
| 420 | MEKIC14 | -32.1840 | -4700.0000 | 195600 | 141600 | - | - | - | - | 3800 |
| | | -135.5340 | | - | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - | - |
| 420 | MEKIC15 | -34.0170 | -4721.0000 | 196000 | 217000 | 28576 | 75251 | 22000 | 1400 | 4500 |
| | | -138.9170 | | - | - | - | 3000 | 370 | - | - |
| | | | | - | - | - | 1100 | - | - | - |
| 420 | MEKIC16 | -36.5500 | -4700.0000 | 141000 | 124000 | 32810 | 87871 | 14400 | 5700 | 3600 |
| | | -137.4000 | | - | - | - | 880 | 230 | - | - |
| | | | | - | - | - | 1400 | - | - | - |
| 420 | MEKIC17 | -36.5500 | -4720.0000 | 181000 | 105000 | 29635 | 72446 | 11800 | 4800 | 3400 |
| | | -137.4000 | | - | - | - | 790 | 280 | - | - |
| | | | | - | - | - | 1400 | - | - | - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / | NUDULE CODE / | LATITUDE / DEPTH | FE * MN * K * P * Y * | AL * SR * K * SN * | SI * MO * TE * | CA * AG * PB * | Ti * LA * | CO * CD * LA * | Ni * AG * W * | CU * MG * GA * | ZN * V * GE * | CR * ZR * | BE * |
|----------------|---------------|------------------|-----------------------|--------------------|----------------|----------------|--------------|----------------|---------------|----------------|---------------|-----------|-------|
| --(06)--- / | -137.2500 | -4680.0000 | 1870000 - | 22226 - | 57022 130000 | 15000 970 | 6100 290 | 3800 - | 6900 - | 3300 - | 690 - | - | - |
| ----- / | -137.0000 | -4340.0000 | 1890000 - | 25930 - | 57490 112000 | 13500 840 | 3800 - | 9100 - | 4300 - | 790 - | - | - | - |
| ----- / | -137.3000 | -4340.0000 | 202000 - | 126000 - | 18521 126000 | 41598 18100 | 3100 380 | 1600 - | 8200 - | 3500 - | 880 - | - | - |
| ----- / | -137.3830 | -4340.0000 | 207000 - | 120000 - | 32810 805 | 56153 6400 | 19700 1000 | 8800 - | 3100 - | 8200 - | 4100 - | 630 - | - |
| 421 | MER1C8 | -36.3830 | -4680.0000 | 1870000 - | 22226 - | 57022 130000 | 15000 970 | 6100 290 | 3800 - | 6900 - | 3300 - | 690 - | - |
| 421 | MER109 | -37.0830 | -4340.0000 | 1890000 - | 25930 - | 57490 112000 | 13500 840 | 3800 - | 9100 - | 4300 - | 790 - | - | - |
| 421 | MER110 | -37.0830 | -4340.0000 | 202000 - | 126000 - | 18521 126000 | 41598 18100 | 3100 380 | 1600 - | 8200 - | 3500 - | 880 - | - |
| 421 | MER111 | -39.6830 | -4340.0000 | 207000 - | 120000 - | 32810 805 | 56153 6400 | 19700 1000 | 8800 - | 3100 - | 8200 - | 4100 - | 630 - |
| 421 | MgH 41 | -34.0160 | -4280.0000 | 2090000 - | 266000 - | 21000 266000 | 47000 260 | 22000 1100 | 4200 - | 3500 13000 | 1700 12000 | 700 - | - |
| 421 | MgH 42 | -34.0160 | -4721.0000 | 1960000 - | 217000 - | 175000 217000 | 22000 1000 | 14000 510 | 4500 - | 5000 14000 | 2100 12000 | 600 - | 400 - |
| 421 | MgH 43 | -37.8330 | -4340.0000 | 265000 - | 112000 - | 35000 112000 | 75000 5000 | 15000 900 | 2800 - | 15000 7000 | 6600 2800 | 710 - | - |
| 421 | MgH 44 | -37.8330 | -4340.0000 | 246000 - | 154000 - | 29000 154000 | 70000 4000 | 25000 800 | 7000 - | 3300 420 | 9000 16000 | 5300 520 | 500 - |
| 421 | MURK4 | -32.6000 | -4350.0000 | 256912 - | 187158 - | 23496 187158 | 78429 1400 | 9973 110 | - | - | - | 3861 - | - |
| 421 | MURK25 | -32.6000 | -4350.0000 | 173735 - | 102180 - | 59376 173735 | 129656 14278 | 28704 - | - | - | - | 4290 - | - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (DEG) / (MIN) / LITUDE / | MN | FE | AL | SI | CA | Tl | CO | Nl | Cu | ZN | * |
|--|-----------|------------|--------|--------|-------|--------|-------|------|------|-------|------|
| ----- | * | * | * | * | * | * | * | * | * | * | * |
| 421 MURR26 | -32.6000 | -4350.0000 | 113480 | 170547 | 45511 | 115214 | 23593 | - | - | 4C91 | - |
| | -137.7166 | - | - | - | - | - | - | - | - | - | - |
| 421 MURR27 | -32.6000 | -4350.0000 | 155103 | 129202 | 75146 | 121523 | 8755 | - | - | 8755 | - |
| | -137.7166 | - | - | - | - | - | - | - | - | - | - |
| 421 MURR28 | -32.6000 | -4350.0000 | 60044 | 211006 | 49691 | 189764 | 13130 | - | - | 13130 | - |
| | -137.7166 | - | - | - | - | - | - | - | - | - | - |
| 421 MURR29 | -32.6000 | -4350.0000 | 98293 | 140129 | 56359 | 169011 | 14472 | - | - | 14472 | - |
| | -137.7166 | - | - | - | - | - | - | - | - | - | - |
| 421 MURR30 | -32.6000 | -4350.0000 | 156688 | 94133 | 60752 | 101893 | 23390 | - | - | 23390 | - |
| | -137.7166 | - | - | - | - | - | - | - | - | - | - |
| 421 MURR31 | -32.6000 | -4350.0000 | 73544 | 124772 | 67843 | 204253 | 17082 | - | - | 17082 | - |
| | -137.7166 | - | - | - | - | - | - | - | - | - | - |
| 418 MURR32 | -39.0666 | -3740.0000 | 264435 | 154009 | 16987 | 78055 | 23260 | - | - | 11993 | - |
| | -105.0833 | - | - | - | - | - | - | - | - | - | - |
| 416 CRON18 | -37.4840 | -3245.0000 | 185100 | 123400 | - | - | 240 | - | - | 6860 | 3350 |
| | -83.1160 | - | - | - | - | 190 | - | - | - | - | - |
| 416 MER112 | -37.4830 | -3245.0000 | 172000 | 127000 | 33808 | 66838 | 14000 | 2000 | 1200 | 7800 | 4500 |
| | -83.1170 | - | - | - | - | 800 | 250 | - | - | - | - |
| 416 MER113 | -37.0870 | -4000.0000 | 191000 | 71000 | 28047 | 61229 | 12000 | 2200 | 800 | 12000 | 5200 |
| | -81.0830 | - | - | - | - | 370 | 460 | - | - | - | - |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / MODULE CODE / LATITUDE / DEPTH / (UG) / (MN) / LONGITUDE / | | MN | FE | AL | SI | CA | TI | CO | Ni | Cu | Cr | Zn |
|--|--|----------|------------|--------|--------|-------|--------|-------|------|------|-------|------|
| ----- | | -83.1160 | -3250.0000 | 265000 | 98000 | 39000 | 84000 | 17000 | 3100 | 1100 | 16000 | 7200 |
| ----- | | -83.1160 | -3250.0000 | 216343 | 219865 | 5291 | 68894 | 33241 | - | - | 20000 | 480 |
| ----- | | -83.1160 | -3250.0000 | 29248 | 80179 | 98801 | 227810 | - | - | - | 380 | - |
| ----- | | -83.1160 | -3250.0000 | 290000 | 25000 | 24872 | 57022 | 13000 | 1400 | - | - | - |
| 416 MGH 55 | | -74.7170 | -3950.0000 | - | 6000 | - | 200 | 470 | - | - | - | - |
| 416 MURR33 | | -74.7170 | -3950.0000 | 353000 | 31000 | 30000 | 70000 | 16000 | 1700 | 100 | 1800 | 1800 |
| 416 MURR34 | | -74.7170 | -3950.0000 | - | - | - | 240 | 570 | - | - | 360 | - |
| 415 MER114 | | -74.7170 | -3950.0000 | 391415 | 50056 | 15875 | 65903 | 28579 | - | - | 60 | - |
| 415 MGH 25 | | -74.7166 | -3950.0000 | - | - | - | 190 | - | - | - | - | - |
| 415 MURK35 | | -74.7166 | -3950.0000 | - | - | - | - | - | - | - | - | - |
| 415 MURK36 | | -74.7166 | -3950.0000 | 329683 | 108530 | 13759 | 67305 | 14105 | - | - | - | - |
| 415 MURK37 | | -74.7166 | -3950.0000 | 444570 | 47694 | 12700 | 51834 | - | - | - | - | - |
| 411 LAM150 | | -39.3660 | -4813.0000 | - | - | - | - | - | - | - | 1200 | 3800 |
| 411 LAM151 | | -39.4660 | -4111.0000 | 117000 | 150000 | - | - | - | - | - | 2200 | 2500 |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NUMBER | LATITUDE / DEPTH | DEPTH / LATITUDE | FE | AL | SI | CA | TI | CO | NI | CU | ZN | CR | V | MG | GE | LR | BE |
|-----------------------|-------------------|---------------------|--------|--------|----|--------|--------|----|------|------|------|------|---|----|----|----|----|
| 410 LAM149 | -29.1000 -26.7330 | -193.0000 -26.7330 | 117000 | 188000 | - | - | - | - | - | 3200 | 2100 | 900 | - | - | - | - | |
| 408 LAM148 | -29.1000 -26.7340 | -158.0000 -26.7340 | 172000 | 176000 | - | - | - | - | - | 4600 | 3700 | 2800 | - | - | - | - | |
| 404 will111 | -29.1000 -36.7343 | -388.0000 -36.7343 | 277700 | 20300 | - | 37391 | 2300 | - | 550 | 1080 | 2050 | 190 | - | - | - | - | |
| 404 will112 | -29.1000 -36.7340 | -3630.0000 -36.7340 | 121800 | 153800 | - | 54685 | 11500 | - | 2170 | 1440 | 580 | 403 | - | - | - | - | |
| 404 will113 | -29.1000 -36.7340 | -3880.0000 -36.7340 | 1790 | 126 | - | 1048 | 368 | - | 15 | - | 503 | - | - | - | - | - | |
| 404 will114 | -29.1000 -36.7340 | -3880.0000 -36.7340 | 2900 | 47200 | - | 259406 | 7700 | - | 60 | 210 | 100 | 115 | - | - | - | - | |
| 404 will115 | -29.1000 -36.7340 | -3880.0000 -36.7340 | 1790 | 85 | - | 1469 | - | - | 16 | - | 190 | - | - | - | - | - | |
| 404 will116 | -29.1000 -36.7340 | -3880.0000 -36.7340 | 304400 | 16800 | - | 36924 | 2000 | - | 550 | 690 | 1960 | 165 | - | - | - | - | |
| 404 will117 | -29.1000 -36.7340 | -3880.0000 -36.7340 | 37 | - | - | 4593 | 232 | - | 0 | - | 63 | - | - | - | - | - | |
| 404 will118 | -24.0660 -36.2670 | -1720.0000 -36.2670 | 3900 | 49700 | - | 286048 | 4000 | - | 60 | 210 | 140 | 133 | - | - | - | - | |
| 404 will119 | -24.0660 -36.2670 | -1720.0000 -36.2670 | 1004 | 67 | - | 80 | 3 | - | 17 | - | 170 | - | - | - | - | - | |
| 404 will120 | -24.0660 -36.2670 | -1720.0000 -36.2670 | 1700 | 31900 | - | 49544 | 3900 | - | 420 | 820 | 70 | 154 | - | - | - | - | |
| 404 will121 | -23.0660 -36.6170 | -2370.0000 -36.6170 | 1700 | 1700 | - | 155176 | 112700 | - | 40 | 20 | 30 | 80 | - | - | - | - | |
| 404 will122 | -23.0660 -36.6170 | -2370.0000 -36.6170 | 30 | - | - | 590 | 4 | - | 11 | - | 136 | - | - | - | - | - | |
| 404 will123 | -23.0660 -36.6170 | -2370.0000 -36.6170 | 92000 | 76400 | - | 207525 | 12600 | - | 1810 | 1610 | 920 | 274 | - | - | - | - | |

CHEMICAL ANALYSES IN PPM

```

***** MARSDEN CODE / NUUULE COUE / LATITUDE / DEPTH ****
***** MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN ****
***** P * K * RB * SR * MO * AG * CD * MG * V * CR ****
***** Y * SN * TE * PB * LA * M * GA * GE * LR * BE ****
***** - - - - - (M) - - - - - (L) - - - - - / LUNGITUDE / ****
***** *

```

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (M) | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * LR * BE * |
|---|---|--|---|
| 401 MER158 02.0000 | -29.8670 -43.96.0000 209000 | 32281 960 14300 6500 2900 | 1300 1100 47C |
| 400 CR0118 78.0167 | -21.5170 -43.0.0000 182700 | 164400 130 - | - - - |
| 400 CR0119 74.9833 | -23.4670 -43.20.0000 132000 | 160000 830 330 5600 2090 | 5380 1760 360 10 |
| 398 BEAN01 90.0000 | -26.0000 150034 121415 | 32598 94554 17581 9891 1966 4007 1517 1 | 19781 336 - - |
| 398 BEAN09 92.0000 | -24.0000 174884 119037 | 16405 78102 20297 8692 2202 4400 1757 4 | - 11700 392 - |
| 398 BEAN10 92.0000 | -22.0000 192702 121835 | 16616 61743 19582 6234 3145 5186 2076 1 | - 12182 448 - |
| 398 BEAN11 92.0000 | -22.0000 190841 131487 | 21961 58845 20297 6354 2752 4479 1837 2 | - 10132 448 - |
| 398 BEAN12 92.0000 | -21.0000 220822 118268 | 18204 43561 19868 399 79 - | - 13268 - |
| 398 CR0123 91.0500 | -23.8670 -43.60.0000 137100 | 113900 - - 266 79 - | 10000 1870 3290 1210 6 |
| 398 CR0124 91.4833 | -23.8670 -43.65.0000 145300 | 98000 - - 60 290 - | - - - |
| | | - - 950 - | 7420 2020 5300 2970 7 |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (M) - / LUNGTITUDE / | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|---|---|--|---|
| 397 BEANO6 -27.0000 108.0000 | - 167453 160162 17939 67959 19439 6594 3224 3064 1278 | - 2926 - - 266 - 158 - - | - 10373 392 - - |
| 397 BEANO7 -27.0000 108.0000 | - 95892 117639 27518 185978 13722 4736 1022 2200 1198 | - 2533 - - 199 - 71 - - | - 8925 336 - - |
| 390 LAM103 -26.5660 -4244.0000 155000 290000 | - - - - - - - - | - - - - - - - - | - 1600 1600 800 - - |
| 387 BARN03 -22.5830 -150.9170 | - 475000 138000 - - - - | - - - - - - - - | - 18900 8300 900 - - |
| 387 BUCH04 -22.3500 -150.2830 | - 178195 171492 40589 - - - - | - - - - - - - - | - - - - - - - - |
| 387 CRUN01 -22.5500 -807.0000 160700 118000 - - - - | - - - - 5140 - 400 - - | - 12860 25700 4140 460 | - - 690 - - |
| 387 MERU98 -29.5830 -5252.0000 128000 178000 33868 9642 9600 8600 4900 2900 | - - - - 1600 - - - - | - - - - - - - - | - - - - - - - - |
| 387 MERU99 -29.5830 -5252.0000 134000 184000 31222 63098 11900 8900 5400 3300 | - - - - 1700 - 810 210 - - | - - - - - - - - | - - - - - - - - |
| 387 MER100 -29.0170 -5338.0000 141000 182000 24872 58892 13700 9800 7300 3200 | - - - - 1800 - 930 200 - - | - - - - - - - - | - - - - - - - - |
| 387 MER101 -24.6830 -4542.0000 157000 170000 21697 44402 17300 8800 5700 4100 | - - - - 1500 - 1000 250 - - | - - - - - - - - | - - - - - - - - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NUMBER CODE / LATITUDE / DEPTH / DEPTH | * MN * FE * AL * SI * CA * TI * CO * NI * CU * CU * ZN * | * MN * FE * AL * SI * CA * TI * CO * NI * CU * CU * ZN * | * MN * FE * AL * SI * CA * TI * CO * NI * CU * CU * ZN * | * MN * FE * AL * SI * CA * TI * CO * NI * CU * CU * ZN * |
|---|---|--|--|--|
| --(W)-- / LATITUDE / DEPTH / DEPTH | -22.3500 -4300.0000 156228 223926 17198 105725 14312 - - - | -154.7500 -4542.0000 140000 189000 21697 50946 16900 1100 210 - | -154.7500 -4542.0000 140000 189000 21697 50946 16900 1100 210 - | -154.7500 -4542.0000 140000 189000 21697 50946 16900 1100 210 - |
| 387 MURK21 | -22.3500 -4300.0000 156228 223926 17198 105725 14312 - - - | -150.2833 -4360.0000 45701 205247 25560 200514 14312 - - - | -150.2833 -4360.0000 45701 205247 25560 200514 14312 - - - | -150.2833 -4360.0000 45701 205247 25560 200514 14312 - - - |
| 387 MURK23 | -22.3500 -4360.0000 45701 205247 25560 200514 14312 - - - | -150.2833 -4360.0000 45701 205247 25560 200514 14312 - - - | -150.2833 -4360.0000 45701 205247 25560 200514 14312 - - - | -150.2833 -4360.0000 45701 205247 25560 200514 14312 - - - |
| 386 MERUS4 | -29.1500 -4120.0000 127000 155000 20109 54218 31000 6300 2600 - | -143.0163 -4120.0000 127000 155000 20109 54218 31000 6300 2600 - | -143.0163 -4120.0000 127000 155000 20109 54218 31000 6300 2600 - | -143.0163 -4120.0000 127000 155000 20109 54218 31000 6300 2600 - |
| 386 MÜH40 | -29.1500 -4120.0000 177000 217000 28000 75000 44000 9000 3600 - | -143.0163 -4120.0000 177000 217000 28000 75000 44000 9000 3600 - | -143.0163 -4120.0000 177000 217000 28000 75000 44000 9000 3600 - | -143.0163 -4120.0000 177000 217000 28000 75000 44000 9000 3600 - |
| 381 DARN02 | -21.6030 -4040.0000 155000 106000 43923 92077 14000 7200 - | -96.9530 -4040.0000 155000 106000 43923 92077 14000 7200 - | -96.9530 -4040.0000 155000 106000 43923 92077 14000 7200 - | -96.9530 -4040.0000 155000 106000 43923 92077 14000 7200 - |
| 381 MER095 | -21.6030 -4040.0000 155000 106000 43923 92077 14000 7200 - | -96.9530 -4040.0000 155000 106000 43923 92077 14000 7200 - | -96.9530 -4040.0000 155000 106000 43923 92077 14000 7200 - | -96.9530 -4040.0000 155000 106000 43923 92077 14000 7200 - |
| 381 MGR13 | -21.6030 -4040.0000 126000 119000 44000 150000 14000 4900 - | -96.9530 -4040.0000 126000 119000 44000 150000 14000 4900 - | -96.9530 -4040.0000 126000 119000 44000 150000 14000 4900 - | -96.9530 -4040.0000 126000 119000 44000 150000 14000 4900 - |
| 381 MGH14 | -21.6030 -4040.0000 133000 154000 50000 121000 19000 7000 - | -96.9530 -4040.0000 133000 154000 50000 121000 19000 7000 - | -96.9530 -4040.0000 133000 154000 50000 121000 19000 7000 - | -96.9530 -4040.0000 133000 154000 50000 121000 19000 7000 - |
| 380 DARN01 | -22.2170 -4500.0000 450000 95500 - - - | -85.2333 -4500.0000 450000 95500 - - - | -85.2333 -4500.0000 450000 95500 - - - | -85.2333 -4500.0000 450000 95500 - - - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / MODULE CODE | LATITUDE / DEPTH | LONGITUDE / DEPTH | FE | AL | SI | CA | TI | CO | NI | CU | ZN |
|----------------------------|----------------------|-------------------|--------|--------|-------|--------|-------|-------|------|------|------|
| (M) | (M) | (M) | (M) | (M) | (M) | (M) | (M) | (M) | (M) | (M) | (M) |
| 380 LAM132 | -22.6160 -60.2500 | -4243.0000 | 180000 | 224000 | - | - | 14000 | - | 2600 | 4400 | 2600 |
| 380 MER096 | -25.5160 -85.2330 | -920.0000 | 423000 | 24700 | 6879 | 3271 | 17300 | 2100 | 1700 | 2600 | 1500 |
| 380 NCH 56 | -25.5160 -85.2330 | -920.0000 | 373000 | 112000 | 5000 | 7000 | 26000 | 21000 | 5900 | 7000 | 5600 |
| 380 WA 18 | -25.5170 -65.2330 | -920.0000 | 339000 | 94100 | - | - | 14300 | - | 1500 | 3300 | 1100 |
| 375 LAM130 | -20.3830 -31.8000 | -4301.0000 | 30000 | 100000 | - | - | 16000 | - | 500 | 500 | 400 |
| 375 LAM131 | -28.7000 -38.2330 | -4777.0000 | 113000 | 132000 | - | - | - | - | 400 | 2400 | 1400 |
| 375 MER154 | -20.9830 -31.8170 | -4130.0000 | 24000 | 130000 | 55036 | 256602 | 14600 | 3100 | 900 | 130 | 400 |
| 374 LAM126 | -29.4500 -21.8500 | -4210.0000 | 62000 | 214000 | - | - | - | - | 2100 | 700 | 700 |
| 374 LAM127 | -28.3000 -28.9660 | -3781.0000 | 127000 | 170000 | - | - | - | - | 4600 | 3800 | 1200 |
| 374 LAM128 | -28.5330 -29.0000 | -3266.0000 | 66000 | 94000 | - | - | - | - | 2100 | 2400 | 900 |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / NUMBER CODE / LATITUDE / DEPTH / (M) - (DG) - LITUDE / | MN * FEE * AL * SI * CA * TI * CO * NI * CU * ZN * | P * K * RB * SR * MO * AG * CD * MG * V * CR * | Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|---|--|--|---|
| 374 LAM129 -28.5330 -4361.0000 113000 - | - | - | - |
| 372 LAM125 -23.0500 -5305.0000 172000 140000 - | - | - | - |
| 364 BEAN14 -17.0000 71.0000 - | 112844 111484 44981 125730 16438 - | 199 3716 1415 3693 1677 - | 15921 15921 224 6 |
| 364 BEAN13 -12.0000 79.0000 - | 293628 45041 16987 60060 15008 - | 533 1378 471 14144 13659 - | 17188 17188 336 2 |
| 364 BEAN16 -12.0000 79.0000 - | 217979 - | - | - |
| 364 CRJ125 -11.9833 79.0834 - | 45000 195600 - | 46 330 4710 580 13500 - | 26 26 17188 17188 336 2 |
| 364 LAM118 -18.8000 78.1500 - | 112000 - | - | - |
| 363 BEAN05 -15.0000 84.0000 - | 219350 71268 28788 83898 15937 2457 1415 8093 7109 - | 1572 - - 266 - 63 - 22555 280 1 | |
| 363 BEAN14 -12.0000 85.0000 - | 207657 129948 18574 50993 19225 5095 2359 5893 3674 - | 2009 - - - 266 - 62 - 11881 392 1 | |
| 363 BEAN15 -12.0000 85.0000 - | 190 120296 23761 83430 19868 5035 2752 3653 10674 2476 - | 1965 - - - 266 - 79 - 10674 50 2 | |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / NODULE CODE / LATITUDE / DEPTH ---(UG)--- / ---(M)--- | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CC * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|--|---|--|---|
| 361 LAM102 -18.2000 -5991.0000 22800 - 106000 - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 360 WA26 -10.8500 -5150.0000 184000 126000 - - 20200 - - 900 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 358 GULD31 -12.7000 134.1670 - - 210000 98600 11700 - - 3100 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 358 GULD32 -12.7000 134.1670 - - 187000 87900 11700 - - 3100 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 358 GULD33 -12.7000 134.1670 - - 201000 93700 11700 - - 3100 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 354 BARN12 -11.3170 178.2060 - - 342000 174000 - - 3100 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 352 CRRN02 -11.8500 -160.8500 - - 169000 180000 - - 8500 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 352 CRRN03 -11.8500 -160.8500 - - 3803.0000 157200 181200 - - 7930 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 352 CRRN04 -11.8500 -160.8500 - - 3803.0000 165700 177900 - - 5120 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 352 CRUN11 -16.7320 -161.3670 - - 4685.0000 162700 263200 - - 150 - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| | | | 560 - - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / NUDDLE CODE | LATITUDE / DEPTH | LATITUDE / (DG) - | LONGITUDE / (DG) - | Mn * Fe * Al * Si * Ca * Ti * Cu * Ni * Cr * | Mn * Fe * Al * Si * Ca * Ti * Cu * Ni * Cr * | Mn * Fe * Al * Si * Ca * Ti * Cu * Ni * Cr * | Mn * Fe * Al * Si * Ca * Ti * Cu * Ni * Cr * | Mn * Fe * Al * Si * Ca * Ti * Cu * Ni * Cr * |
|----------------------------|-----------------------|-------------------|--------------------|--|--|--|--|--|
| 352 LAM094 | -18.1330 -161.4830 | -4839.0000 - | 25000 - | 85500 - | - | 18000 - | - | 600 - |
| 351 BARN11 | -13.8830 -150.5830 | - - | 314000 - | 117000 - | - | - | - | - |
| 351 CRUN05 | -11.5500 -158.5160 | -5338.0000 - | 148100 - | 144500 - | - | 12400 380 | 7300 - | 2630 - |
| 351 CRUN06 | -11.4160 -157.6160 | -5302.0000 - | 173400 - | 121400 - | - | 300 690 | 6980 - | 3010 - |
| 351 CRUN12 | -13.8840 -150.5840 | -3695.0000 - | 121400 - | 150400 - | - | 280 770 | 12100 - | 4240 - |
| 351 CRUN15 | -13.8840 -150.5840 | -3623.0000 - | 144400 - | 158400 - | - | 250 290 | 6770 - | 5040 - |
| 351 CRUN16 | -13.8840 -150.5840 | -3623.0000 - | 174200 - | 174400 - | - | 290 210 | 4570 - | 5060 - |
| 351 CRTH03 | -11.6670 -159.2670 | - | - | 153900 - | - | - | - | 5440 - |
| 351 LAM085 | -14.4830 -150.0160 | -1659.0000 - | 125000 - | 167000 - | - | - | - | 9770 - |
| 351 LAM086 | -14.4830 -150.0160 | -1082.0000 - | 98000 - | 178000 - | - | - | - | 4000 - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH | | FE | AL | SI | CA | Ti | CU | Ni | CU | ZN |
|---|--------|-----------|------------|--------|--------|----|----|----|-------|------|
| -(Lb)- - (M)- | | * | * | * | * | * | * | * | * | * |
| / LONGITUDE / | | P | K | SR | MO | AG | CD | MG | V | CR |
| ----- | | * | * | * | * | * | * | * | * | * |
| ----- | | * | * | * | * | * | * | * | * | * |
| ----- | | * | * | * | * | * | * | * | * | * |
| ----- | | * | * | * | * | * | * | * | * | * |
| ----- | | * | * | * | * | * | * | * | * | * |
| ----- | | * | * | * | * | * | * | * | * | * |
| ----- | | * | * | * | * | * | * | * | * | * |
| 351 | LAM087 | -14.6330 | -4784.0000 | 196000 | 182000 | - | - | - | 4600 | 4000 |
| | | -150.7660 | - | - | - | - | - | - | 2000 | - |
| 351 | LAM088 | -14.9330 | -4980.0000 | 204000 | 151000 | - | - | - | - | - |
| | | -150.9330 | - | - | - | - | - | - | 3800 | - |
| 351 | LAM089 | -14.8160 | -1027.0000 | 81000 | 136000 | - | - | - | 6200 | - |
| | | -154.0160 | - | - | - | - | - | - | - | - |
| 351 | LAM090 | -14.8000 | -1482.0000 | 207000 | 165000 | - | - | - | 5400 | 2000 |
| | | -154.0330 | - | - | - | - | - | - | 900 | - |
| 351 | LAM091 | -14.8660 | -1974.0000 | 156000 | 129000 | - | - | - | 14800 | 5000 |
| | | -154.1350 | - | - | - | - | - | - | 1500 | - |
| 351 | LAM092 | -14.8660 | -4790.0000 | 140000 | 155000 | - | - | - | 6400 | 4200 |
| | | -154.0830 | - | - | - | - | - | - | 800 | - |
| 351 | LAM093 | -14.0830 | -5022.0000 | 129000 | 97000 | - | - | - | 5800 | 2400 |
| | | -155.1500 | - | - | - | - | - | - | 800 | - |
| 351 | LAM094 | -16.5330 | -4018.0000 | 186000 | 170000 | - | - | - | 1700 | 7200 |
| | | -156.6660 | - | - | - | - | - | - | 600 | - |
| 351 | LAM095 | -14.8500 | -4980.0000 | 212000 | 116000 | - | - | - | 3400 | 5000 |
| | | -156.1830 | - | - | - | - | - | - | 1600 | - |
| 351 | LAM096 | -14.4000 | -5095.0000 | 156000 | 119000 | - | - | - | 3900 | 7200 |
| | | -157.8160 | - | - | - | - | - | - | 4300 | - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (W.G.) / -(N) / - | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|---|---|---|---|
| / LATITUDE / DEPTH / | * HN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
| ----- | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * | ----- |
| ***** | ***** | ***** | ***** |
| 351 LANU97 -12°43'30" -5220.0000 -158.3160 | - 79000 56000 - - - | - 37000 - - - | - 4300 - 4600 1800 - - |
| 351 LANU98 -12°45'00" -5008.0000 -159.4160 | - 156000 127000 - - - | - 28000 - - - | - 4000 - 6400 2700 - - |
| 351 MERU72 -13°88'30" -3023.0000 -150.5830 | - 157000 175000 - - - | - 16934 41598 19600 6800 - | - 4300 - 3100 2100 - 530 - |
| 351 MERU73 -13°88'30" -3625.0000 -150.5830 | - 143000 174000 - - - | - 22226 54685 18000 7800 - | - 4300 - 3100 2400 - 600 - |
| 351 SAN 22 -12°98'40" -522.0000 -154.1100 | - 185778 117499 22438 46646 - | - 21440 6654 - - - | - 5505 5029 1038 - - |
| 350 BARN04 -13°78'50" -141.2160 | - - 473000 95900 - | - - - - - | - 1200 - 17200 7100 - - |
| 350 BARN07 -12°33'30" -144.2500 | - - 233000 85700 - | - - - - - | - 1500 - 12500 6200 - - |
| 350 BARN08 -16°48'30" -145.5500 | - - - - 414000 138000 - | - - - - - | - 11600 9600 1200 - - |
| 350 BARN09 -16°16'70" -146.0000 | - - - - 149000 62400 - | - - - - - | - 4100 5000 700 - - |
| 350 BARN10 -16°91'70" -146.3830 | - - - - 252000 183000 - | - - - - - | - 5800 4600 1800 - - |

CHEMICAL ANALYSES IN PPM .

CHEMICAL ANALYSES IN PPM .

| MASDEN CODE / MODULE CODE / LATITUDE / DEPTH | * MN * FE * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * |
|---|------------------|----------------|----------------|---------------|--------------|
| --(LOC)-- / -(M)--- | * P * K * | * SR * MO * | * AG * CC * | * MG * V * | * CR * |
| ----- / LONGITUDE / | * Y * SN * | * TE * PB * | * LA * N * | * GA * GE * | * ZR * BE * |
| ----- | * | * | * | * | * |
| ***** | ***** | ***** | ***** | ***** | ***** |
| 350 LAMU84 -14°30'000 -149.5330 -149.5330 | 108000 - - - | 110000 - - - | 112000 - - - | 114000 - - - | 116000 - - - |
| 350 MERU81 -14°40'70 -430.0000 216000 120000 1270 5800 | 28047 - - - | 38424 1100 430 | 18700 8800 - | 3500 7700 - | 3500 3500 - |
| 350 MERU82 -14°41'70 -4460.0000 150000 161000 2130 5000 | 33868 - - - | 62631 1200 310 | 20800 12000 - | 5000 2300 - | 1700 1700 - |
| 350 MERU83 -14°41'70 -170.0000 232000 126000 1220 3400 | 3704 - - - | 7010 1500 500 | 31400 11100 - | 15300 5800 - | 950 950 - |
| 350 MERU84 -14°48'30 -1270.0000 224000 138000 1710 3200 | 6879 - - - | 13087 1600 560 | 29200 11800 - | - - | - - |
| 350 MERU85 -14°53'30 -4840.0000 193000 79000 1200 - | 37043 - - - | 68240 12000 - | 11000 - | 5800 1700 - | 670 670 - |
| 350 MERU86 -14°59'00 -2132.0000 160000 162000 3500 - | 11113 - - - | 32250 500 340 | 5000 - | 1500 8100 - | 300 300 - |
| 350 MSH 32 -12.3330 -4840.0000 158000 105000 23000 - | 49000 - - - | 140000 530 260 | 10000 - | 4900 3400 - | 350 350 - |
| 350 MSH 33 -12.3330 -4460.0000 240000 98000 15000 - | 190 - - - | 350 350 170 | - - | - - | - - |
| 350 MSH 34 -13.9160 -4460.0000 164000 224000 7000 - | 224000 - - - | 84000 6100 420 | 15000 6000 - | 1800 1800 - | 7600 7600 - |
| 350 MSH 35 -14.5330 -4460.0000 164000 33000 7000 - | 33000 - - - | 79000 800 270 | 26000 1000 130 | 16000 14000 - | 4900 3400 - |
| 350 MSH 36 -14.5330 -4460.0000 170 - | - - - | - - - | - - - | - - - | 2000 2000 - |
| 350 MSH 37 -14.5330 -4460.0000 170 - | - - - | - - - | - - - | - - - | 500 500 - |
| 350 MSH 38 -14.5330 -4460.0000 170 - | - - - | - - - | - - - | - - - | 700 700 - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (H) / LONITUDE / | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * MN * K * RB * SR * MU * AG * CC * MG * V * CR * | * SN * TE * PB * LA * W * GA * GE * LR * BE * |
|---|--|---|---|
| -141.9160 -2132.0000 | 228000 196000 160000 45000 28000 14000 7000 4800 1300 500 | 500 1100 500 210 - - - - - | 800 12000 12000 - - - - - |
| -146.0000 -1700.0000 | 278000 182000 120000 36000 15000 23000 80000 24000 10000 600 | 39000 1400 640 210 - - - - - | 10000 10000 10000 - - - - - |
| -146.0000 -1190.0000 | 95000 70000 130000 240000 8000 46000 30000 21000 780 650 | 600 4000 4000 210 - - - - - | 650 21000 21000 - - - - - |
| -146.0000 -1270.0000 | 297000 175000 130000 26000 14000 14000 7700 21000 1400 270 | 340 1500 420 3100 160 - - - - - | 400 21000 21000 - - - - - |
| -145.5500 -1270.0000 | 322000 175000 110000 30000 13000 14000 7200 14000 1200 800 | 240 1700 570 1900 120 - - - - - | 500 14000 14000 - - - - - |
| -149.5000 -4300.0000 | 80153 299011 33339 74036 26969 - - - - - | - - - - - - - - - | - - - - - - - - - |
| -149.5000 -4300.0000 | 104199 342571 16405 63846 23656 - - - - - | - - - - - - - - - | - - - - - - - - - |
| -149.5000 -4300.0000 | 13429 169808 56624 207058 14232 - - - - - | - - - - - - - - - | - - - - - - - - - |
| -149.5000 -1270.0000 | 303000 189000 - - - - - - - - - | - - - - - - - - - | - - - - - - - - - |
| -149.5000 -1270.0000 | - - - - - - - - - - - - - - - | - - - - - - - - - | - - - - - - - - - |
| -146.0000 -4830 -237895 114771 5609 5188 28659 10431 15179 3064 - | - - - - - - - - - - - - - - - | - - - - - - - - - | - - - - - - - - - |
| -146.0000 -4833 -237895 114771 5609 5188 28659 10431 15179 3064 - | - - - - - - - - - - - - - - - | - - - - - - - - - | - - - - - - - - - |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / NODULE CODE / LATITUDE / DEPTH ---(LOC)--- / -(H)--- / LONGITUDE / | | MN | FE | AL | SI | CA | Tl | CO | Ni | CU | ZN |
|---|--------|-----------|------------|--------|--------|--------|--------|-------|-------|-------|-------|
| * | * | * | * | * | * | * | * | * | * | * | * |
| 350 | MA 03 | -18.9170 | -4460.0000 | 191000 | 186000 | - | - | 22600 | - | 6000 | 3000 |
| | | -146.5330 | - | - | 4 | 1166 | - | - | 3 | - | - |
| 350 | MA 14 | -18.9170 | -4460.0000 | 212000 | 178000 | - | 24200 | - | 6500 | 3400 | 1400 |
| | | -146.5330 | - | - | 1 | 1193 | - | - | 3 | - | - |
| 350 | WILL07 | -16.4830 | -1265.0000 | - | 159000 | - | 24000 | - | 11000 | 13000 | 1400 |
| | | -145.5500 | - | - | - | - | 720 | - | - | 23000 | 750 |
| 349 | BARN06 | -15.3830 | - | - | 236000 | 98200 | - | - | 1200 | 12200 | 5000 |
| | | -136.3000 | - | - | - | - | - | - | - | - | - |
| 349 | CRUN20 | -15.3840 | -4480.0000 | 214900 | 81400 | - | - | 400 | 2070 | 700 | 12880 |
| | | -136.3000 | - | - | - | - | 160 | - | - | - | 7440 |
| 349 | CRTH01 | -13.6170 | - | - | 238200 | 116500 | - | - | - | 1240 | 17980 |
| | | -135.5170 | - | - | - | - | - | - | - | - | 9060 |
| 349 | CRTH02 | -14.9830 | - | - | 229700 | 71100 | - | - | - | - | - |
| | | -136.0330 | - | - | - | - | - | - | - | - | - |
| 349 | LAMU80 | -10.6330 | -3860.0000 | 70000 | 108000 | - | - | 58000 | - | 300 | 2900 |
| | | -134.8660 | - | - | - | - | - | - | - | - | - |
| 349 | MERO87 | -15.3830 | -4480.0000 | 203000 | 81000 | 45511 | 73849 | 13900 | 2900 | 1200 | 11700 |
| | | -136.3000 | - | 2230 | 14400 | - | 670 | 410 | - | - | - |
| 349 | MERO88 | -14.9830 | -4465.0000 | 120000 | 98000 | 73558 | 142089 | 9000 | 6400 | 1200 | 7700 |
| | | -136.0330 | - | - | 19500 | - | 600 | - | 180 | - | 5300 |

CHEMICAL ANALYSES IN PPM .

| | MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (LW) / LUNGTITUDE / | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * | * |
|-----|---|--|---|---|--|
| 349 | MERU89 -12° 85'00" -4318.00000 | 239C00 - 70000 22755 47207 16000 3000 - 850 14600 9200 460 | - 4000 - 320 300 - - - | - 280 - 21000 4000 - 1100 19000 20000 - 12000 410 | - - - - - 3600 - 3600 - 3600 - 3600 - |
| 349 | MUH 38 -12° 85'00" -4318.00000 | 310000 - 91000 30000 61000 21000 4000 - 1100 19000 20000 - 600 | - 50000 - 50000 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - | - - - - - - - - - - - | - 410 - 3600 - 3600 - 3600 - 3600 - 3600 - |
| 349 | MGH 39 -14° 38'30" -4465.00000 | 152000 - 147000 38000 135000 14000 5500 - 1400 90000 17000 - 4400 | - 17000 - 17000 - 70 - 340 300 - 180 - 180 - 180 - 180 - | - - - - - - - - - - - | - 410 - 3600 - 3600 - 3600 - 3600 - 3600 - |
| 349 | MuH 51 -15° 36'30" -4480.00000 | 196000 - 182000 34000 90000 14000 7000 - 1400 10000 17000 - 6400 | - 7000 - 7000 - 180 - 620 360 - 390 - 390 - 390 - 390 - | - - - - - - - - - - - | - 410 - 3600 - 3600 - 3600 - 3600 - 3600 - |
| 349 | SKUK27 -15° 38'33" -4480.00000 | 19C734 - 128269 28259 58471 20154 6534 - 2900 1200 11700 10700 - 600 | - - - - - - - - - - - | - - - - - - - - - - - | - 530 - 900 - 900 - 900 - 900 - |
| 349 | STSHe1 -15° 38'20" -4480.00000 | 203000 - 81000 81000 - 6700 410 - 2900 1200 11700 10700 - 600 | - - - - - - - - - - - | - - - - - - - - - - - | - 530 - 900 - 900 - 900 - 900 - |
| 349 | STSHe2 -14° 98'60" -4465.00000 | 120000 - 98000 - 98000 - 6000 400 - 2900 1200 11700 10700 - 600 | - - - - - - - - - - - | - - - - - - - - - - - | - 530 - 900 - 900 - 900 - 900 - |
| 349 | STSHe3 -14° 85'00" -4465.00000 | - - - - - - - - - - - | - - - - - - - - - - - | - - - - - - - - - - - | - 530 - 900 - 900 - 900 - 900 - |
| 348 | EARN05 -11° 23'30" -4271.9830 | - - - - - - - - - - - | - - - - - - - - - - - | - - - - - - - - - - - | - 530 - 900 - 900 - 900 - 900 - |
| 346 | BuJU01 -10° 28'00" -4093.3600 | - - - - - - - - - - - | - - - - - - - - - - - | - - - - - - - - - - - | - 530 - 900 - 900 - 900 - 900 - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / | NUDULE CODE / | LATITUDE / | DEPTH / DEPTH --(DG)-- / LONITUDE / | * Mn * Fe * Al * Si * Ca * Ti * Co * Ni * Cu * ZN * | * P * K * SR * MO * AG * CC * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|----------------|---------------|------------|---|---|---|---|
| 346 BUJUC 2 | -109.3800 | -2000.0000 | 24300 | 288000 4762 64968 16438 | - 800 - | - 120 - |
| 346 BUJUC 3 | -109.3800 | -2000.0000 | 5800 | 311000 5291 57957 19296 | - 480 - | - 32 - |
| 346 BUJUC 4 | -109.3800 | -2000.0000 | 387200 | 55000 2116 37859 17867 | - 420 - | - 290 - |
| 346 BUJUC 5 | -109.3800 | -2000.0000 | 196700 | 178000 16405 57957 37164 | - 940 - | - 6800 - |
| 346 BUJUC 6 | -109.3800 | -2000.0000 | 1800 | 77000 83613 232297 87908 | - 145 - | - 63 - |
| 346 LAMU79 | -109.6500 | -4122.0000 | 152000 | 83000 - - - | - - - | - 1400 - |
| 346 MEKU90 | -102.4000 | -4150.0000 | 172000 | 116000 20109 81794 10000 1700 | - 410 430 - | - 1600 - |
| 346 MGH 15 | -102.4000 | -4150.0000 | 215000 | 133000 25000 103000 13000 2100 | - 520 510 540 - | - 2000 - |
| 346 MGH 16 | -102.4000 | -4150.0000 | 196000 | 112000 49000 112000 16000 4900 | - 610 640 310 - | - 1100 - |
| 346 MGH 17 | -102.4000 | -4150.0000 | 196000 | 105000 42000 117000 21000 5200 | - 470 390 820 - | - 1100 - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM.

 * MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH
 * MN * FE * AL * SI * CA * TI * CC * NI * CU * ZN *
 * P * K * RB * SR * MO * AG * CD * HS * V * CR *
 * Y * SN * TE * PB * LA * h * GA * GE * ZR * BE *
 * *****

CHEMICAL ANALYSES IN PPM -

CHEMICAL ANALYSES IN PPM .

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / -(M)- | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|---|---|--|---|
| --(DC)-- / LATITUDE / | * K * SN * TE * PB * LA * W * GA * GE * ZR * BE * | * K * SN * TE * PB * LA * W * GA * GE * ZR * BE * | * K * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
| 308 MER079 -8°50'00" -43°30'.0000 423000 8300 15346 29446 12400 600 60 1400 1300 430 | -85.6000 260 8900 - 220 - 220 - 270 1100 270 1100 1900 670 | -83.5670 200 15400 - 780 - 780 - 1100 140 140 16000 2500 1100 370 17 | - |
| 308 MER080 -6°91'70" -40°60'.0000 96000 77100 44452 205655 6900 1100 1100 270 1100 1900 670 | - 200 - 15400 - 430 - 430 - 220 - 220 - 1100 140 140 16000 2500 1100 370 17 | - | - |
| 308 MGH 05 -6°91'60" -40°60'.0000 310000 57000 21000 107000 100000 11000 1100 270 1100 1900 670 | - 12000 - 12000 - 420 - 420 - 300 - 300 - 1100 140 140 16000 2500 1100 370 17 | - | - |
| 308 MGH 06 -9°93'30" -44°40'.0000 364000 84000 20000 51000 18000 2600 700 700 15000 4900 500 | - 6000 - 6000 - 550 - 550 - 620 - 620 - 700 700 700 16000 4400 500 | - | - |
| 308 MGH 07 -9°93'30" -44°40'.0000 341000 91000 22000 56000 13000 2900 900 900 17000 6300 500 | - 95 - 95 - 420 - 420 - 670 - 670 - 700 700 700 17000 540 500 | - | - |
| 300 LAM116 -9°96'60" -11°36'.0000 240000 180000 - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - | - | - |
| 251 WINT05 02°05'00" 19°51'70" -130.0000 82860 229403 - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - | - | - |
| 251 WINT06 62°33'40" 19°39'20" -91.0000 147135 205623 - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - | - | - |
| 251 WINT08 60°61'50" 19°05'20" -60.0000 27103 295845 - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - | - | - |
| 250 WINT01 63°21'70" 22°00'70" -108.0000 174239 126591 - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - | - | - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE | LATITUDE / DEPTH | DEPTH / (M) | FE | AL | SI | CA | TI | CO | NI | CU | ZN |
|----------------------------|------------------|---------------------|------------|--------|--------|-------|--------|-------|------|------|-------|
| / LONGITUDE | - | * | * | * | * | * | * | * | * | * | * |
| | | | P | K | R8 | SR | MO | CC | HG | V | CR |
| | | | * | * | * | * | * | * | * | * | * |
| | | | Y | SN | TE | PB | LA | GA | GE | ZR | BE |
| | | | * | * | * | * | * | * | * | * | * |
| 250 | WINT02 | 64.8550 22.7830 | -78.0000 | 164172 | 179046 | - | 430 | 580 | - | 150 | 630 |
| 250 | WINT03 | 64.8550 23.1500 | -78.0000 | 1935 | 174849 | - | 220 | 10 | - | 50 | 70 |
| 250 | WINT04 | 64.8550 23.1500 | -78.0000 | 106092 | 218212 | - | 410 | 390 | - | 130 | 290 |
| 250 | WINTC7 | 61.5070 20.0000 | -110.0000 | 132422 | 225206 | - | 470 | 470 | - | 200 | 250 |
| 250 | WINT10 | 60.4250 27.3920 | -18.0000 | 100671 | 372080 | - | 40 | - | - | 100 | 210 |
| 249 | GÜRS 1 | 65.3000 38.7850 | - | 191556 | 60148 | 35615 | 121243 | 2001 | 3417 | - | 361 |
| 249 | GÜRS 2 | 65.3000 38.7850 | - | 204340 | 65743 | 18204 | 85393 | 10720 | 3357 | - | 5669 |
| 249 | GÜRS 3 | 65.3000 33.7850 | - | 189130 | 51545 | 19739 | 107174 | 16080 | 4795 | - | 11700 |
| 249 | GÜRS 4 | 65.4330 38.6160 | - | 39414 | 141488 | 57894 | 121056 | 10863 | - | - | 14474 |
| 235 | SUM09 | 63.0666 178.4833 | -2283.0000 | 88000 | 124000 | 19600 | 156000 | 17900 | 4600 | 1400 | 2700 |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / DEPTH --(LOG)-- / (M) / LONGITUDE / | NN | FE | AL | SI | CA | Tl | CO | NI | CU | ZN |
|--|---------|------------|---------|--------|-------|--------|-------|------|------|------|
| 214 WINTC9 | 29.6000 | -104.0000 | 1200031 | 157364 | - | 200 | 410 | - | 320 | 320 |
| 200 SUMM08 | 57.7166 | -5228.0000 | 107000 | 192000 | 13700 | 121000 | 14400 | 5900 | 1700 | 1900 |
| 196 D1CH10 | 52.7830 | -1460.0000 | 185200 | 150700 | - | - | - | - | 2500 | 3000 |
| 196 D1CH11 | 52.7830 | -1460.0000 | 199500 | 147800 | - | - | - | - | 3100 | 3100 |
| 196 D1CH12 | 52.7830 | -1460.0000 | 199600 | 145400 | - | - | - | - | 3700 | 3100 |
| 196 GULD13 | 52.7840 | -1500.0000 | 185000 | 151000 | 2700 | - | - | 7700 | 2500 | 3000 |
| 196 GULD14 | 52.7840 | -1530.0000 | 200000 | 148000 | 2700 | - | - | 7700 | 3100 | 3100 |
| 196 GULD15 | 56.1660 | -1530.0000 | 197000 | 145000 | 2700 | - | - | 7700 | 3700 | 3700 |
| 195 D1CH14 | 56.1660 | -1460.0000 | 209000 | 134000 | - | - | - | - | 4000 | 3700 |
| 195 D1CH12 | 56.1660 | -1460.0000 | 193800 | 130300 | - | - | - | - | 2300 | 5800 |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN ppm.

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH ---(LNG)--- / (M)--- | * PN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * N * GA * GE * ZR * BE * |
|---|---|--|---|
| 160 GULUO 1 -40.2330 -5025.0000 135000 120000 9400 - - - 8900 1500 2100 4900 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 160 GULUO 2 -40.2330 -5029.0000 133000 122000 9400 - - - 8900 1200 1600 4900 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 160 GULUO 3 -40.2330 -5029.0000 108000 91600 9400 - - - 8900 700 2400 5300 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 160 MERUO 2 -40.2330 -5029.0000 119000 117100 69000 63503 139752 100000 6300 2300 4500 4700 570 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 160 SKURLO -41.1250 -5450.0000 132422 89173 40377 147651 19296 4436 3145 4321 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 160 MERUO 5 -40.2330 -4940.0000 143000 120000 - - - 14600 - 3500 2800 2900 299 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 159 MERUO 3 -43.9600 -4350.0000 177000 94000 37573 117784 17300 5500 2300 7200 4200 910 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 158 LAMUO 5 -42.0330 -4116.0000 190000 230000 - - - 16000 - 2400 2400 800 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 158 MERUO 4 -40.3330 -4500.0000 165000 95000 42865 133208 14300 4900 2200 5800 3600 760 - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 158 SKURLO 1 -40.2330 -4475.0000 125839 72877 46304 139705 12936 4196 - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / MODULE CODE / | LATITUDE / DEPTH | DEPTH / (M) - | FE * AL * | SI * | CA * | Tl * | CO * | NI * | CU * | ZN * |
|------------------------------|-----------------------|----------------------|----------------------|-------------|---|------------|------------|------------|---------------|--------------------|
| SKUR12 / | 40°33'33" -44°75.0000 | 168741 1965 | 104840 - | 30058 - | 86889 - | 16009 - | 62334 - | 2438 - | 5893 13388 | - |
| SKUR13 / | 40°33'33" -44°75.0000 | 152246 1834 | 125402 - | 26301 - | 103061 - | 18582 - | 6234 - | 3539 - | 3693 14775 | - |
| GRUN93 / | 40°25'00" -4500.0000 | 117600 - | 101200 - | - - | - 200 | - 260 | - - | - - | - - | - |
| HED05 / | 40°38'30" -1260.0000 | 100000 - | - - | - - | 30000 - | - - | - - | 3000 - | 700 - | - |
| MERUG5 / | 40°45'00" -5400.0000 | 188000 - | 84000 - | 35985 - | 127132 800 300 | 10900 - | 1800 - | 700 - | 5600 - | 3700 - |
| MERUG6 / | 40°38'00" -1260.0000 | 235000 - | 88000 - | 24872 - | 71044 800 280 | 12100 - | 2100 - | 4300 - | 6100 - | 400 - |
| MUR23 / | 42°15'00" -2520.0000 | 152000 170 340 | 217000 5000 - | 18000 - | 135000 1300 500 1000 110 710 | 18000 - | 4100 - | 1700 - | 1600 - | 1600 10000 - |
| MUR24 / | 42°75'00" -2520.0000 | 175000 - | 217000 30000 - | 200000 - | 130000 1200 590 260 | 21000 - | 5700 - | 1600 - | 1500 - | 1500 11000 - |
| SUR108 / | 42°75'00" -2520.0000 | 128000 - | 157000 - | 128000 - | 130000 1200 590 710 | 15000 - | 94000 - | 15000 - | 1200 - | 1100 - |
| W-A 15 / | 40°25'00" -4500.0000 | 203000 - | 87500 - | - 1 | - 453 | - - | - - | 12900 - | - 6 | 400 - |
| | | | | | | | | | | |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH | * MN * FE * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * |
|---|---------------------|---------------|--------------|--------------|-----------------|
| --(DL)-- - (M) - / LONGITUDE / | * P * K * | * SR * MO * | * AG * | * MG * | * V * |
| ----- | * Y * SN * | * TE * | * PB * LA * | * GA * | * CR * |
| 157 W-A 16 | -46.2500 -4500.0000 | 210000 141000 | - | - 238000 | - 5000 4200 |
| | -128.4500 | - | - 3 | - 1449 | - 3 - |
| 157 W-A 17 | -42.7500 -2520.0000 | 228000 196000 | - | - 216000 | - 4500 3200 |
| | -128.0500 | - | - 2 | - 1428 | - - |
| 147 LAM074 | -42.9500 -3243.0000 | 120000 165000 | - | - | - 2900 2700 |
| | -25.0663 | - | - | - | - - |
| 145 LAM073 | -45.0830 -2481.0000 | 192000 96000 | - | - | - 2100 5700 |
| | -7.9500 | - | - | - | - - |
| 131 MER007 | 33.8500 -110.0000 | 126000 7700 | 3175 2336 | 288000 20 | 60 420 70 70 |
| | 138.6830 | - | 6000 - | 3500 70 | - - |
| 131 NILNO1 | 34.3840 -260.0000 | 368650 201986 | - | - 8413 46812 | - - |
| | 139.0830 | - | - | - | - - |
| 130 MER009 | 36.4830 -5720.0000 | 190000 118000 | 62974 264080 | 13100 1800 | 10 1200 700 410 |
| | 146.7200 | - | - | 570 1300 | - - |
| 130 MER010 | 38.0000 -3500.0000 | 198000 139000 | - | - 1500 480 | - - |
| | 146.0000 | - | - | - | - - |
| 130 SAN 02 | 32.8600 -5920.0000 | 96840 169394 | - | - | - 943 2121 2875 |
| | 149.7250 | - | - | - | - - |
| 128 LAM053 | 37.0500 -4978.0000 | 125000 174000 | - | - 14000 | - 900 2600 1400 |
| | 166.5660 | - | - | - | - - |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(DGJ)- / -(M)- | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * LR * BE * |
|---|--|--|---|
| 128 LAMU54 34.7830 -42.26.0000 160.6660 | - 56600 159000 - - - 11000 - - 1000 - 1200 1600 - - | - 145000 147000 27000 131000 14000 7000 3900 5000 14000 14000 5000 2900 1000 - | - 173.2660 55 - - 2300 - 7 - 7 1000 - |
| 126 MGH 27 36.5000 -41.95.0000 173.2660 | - 145000 147000 27000 131000 14000 7000 3900 5000 14000 14000 5000 2900 11 - | - 173.2660 55 - - 2300 - 7 - 7 1000 - | - - - - - - - - - - |
| 126 MURR07 37.0833 -53.00.0000 177.0666 | - 158197 151489 24713 136013 15285 - - - - - - - - | - - - - - - - - - - | - - - - - - - - - - |
| 126 SK0R06 34.9904 -59.71.0000 172.9417 | - 130408 108197 36250 129563 15508 4076 2202 2907 14896 - - | - 1528 - - - - - - - - | - - - - - - - - - - |
| 125 BUCH02 37.8660 -50.00.0000 160.2840 | - 154246 140998 20268 - - - - - - - - | - - - - - - - - - - | - - - - - - - - - - |
| 125 MURR08 37.8660 -50.20.0000 160.2833 | - 200383 143237 30958 129656 18847 - - - - - | - - - - - - - - - - | - - - - - - - - - - |
| 125 MURR09 37.8666 -50.20.0000 160.2833 | - 178376 130997 31222 99415 - - - - - | - - - - - - - - - - | - - - - - - - - - - |
| 125 MURK10 37.8666 -50.20.0000 160.2833 | - 179149 124633 34927 129095 18977 - - - - - | - - - - - - - - - - | - - - - - - - - - - |
| 125 MURK11 37.6666 -50.20.0000 165931 202736 54031 74924 - - - - - | - - - - - - - - - - | - - - - - - - - - - | - - - - - - - - - - |
| 125 SK0R07 35.0266 -59.02.0000 157745 121275 33551 87543 15651 8273 - - - - - | - 2140 - - - - - - - - | - - - - - - - - - - | - - - - - - - - - - |
| | | | - 13509 - - - - - |

CHEMICAL ANALYSES IN PPM .

CHEMICAL ANALYSES IN PPM .

| * | MARSDEN CODE / | NUDULE CODE / | LATITUDE / | DEPTH / | AL * | SI * | CA * | Tl * | CO * | Ni * | CU * | ZN * |
|-----|----------------|---------------|------------|---------|-----------------|-------|----------------------|---------------|------|------|---------------|--------------|
| * | * MN * - | * FE * | -4790.0000 | 161000 | - | - | - | - | - | 3000 | 4600 | 2400 |
| * | * P * - | * K * | -4591.0000 | 173000 | 185000 | - | - | - | - | - | - | - |
| * | * Y * - | * SN * | -5035.0000 | 104000 | 130000 11600 | 49215 | 133676 760 170 | 11400 1900 | 6500 | 2900 | 3300 | 2900 |
| * | * | * | -5064.0000 | 129782 | 111973 13615 | 42706 | 125637 - | 18296 - | - | - | - | - |
| 122 | SAN 09 | -137.8830 | -137.8830 | - | - | - | - | - | - | 1179 | 4086 15680 | - |
| 122 | SAN 10 | -137.8830 | -5064.0000 | 154401 | 149671 9630 | 30217 | 80159 | 20368 | 7373 | 1337 | 3457 7960 | 3115 |
| 122 | SAN 11 | -137.8830 | -5064.0000 | 81198 | 65254 29970 | 57894 | 179201 | 12864 | 3477 | 393 | 3457 10554 | 878 |
| 120 | ARGUO 1 | -118.0000 | -32.5000 | 774 | - | - | - | - | - | - | - | - |
| 120 | UKUNG 8 | -117.6333 | -1300.0000 | - | 50 | - | 50 | - | - | 100 | 1000 3015 | 399 50 |
| 120 | UKUNG 9 | -118.0500 | -31.3833 | 142300 | 151500 | - | - | 1429 | 119 | - | - | - |
| 120 | CRUN 91 | -118.0170 | -31.0834 | 194000 | 129200 | - | - | 290 | - | 5290 | 5810 | 4470 930 |
| | | | | 145900 | 92200 | - | - | 420 | - | - | - | - |
| | | | | - | - | - | - | 1160 | - | 2360 | 2020 | 4810 1300 |
| | | | | - | - | - | - | 320 | - | - | 520 | 120 |
| | | | | - | - | - | - | 370 | - | - | - | - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM -

| MARDEN CODE / NODULE CODE / LATITUDE / DEPTH | | FE | AL | SI | CA | Tl | CO | Ni | CU | ZN |
|--|--------|-------------|-----------|--------|--------|-------|-------|--------|------|-------|
| --(DG)-- / -(M)--- | | * | * | * | * | * | * | * | * | * |
| / LONGITUDE / | | P | K | RB | SR | MU | AG | CD | MG | V |
| | | * | * | * | * | * | * | * | * | CR |
| | | Y | SN | TE | PB | LA | W | GA | GE | ZR |
| | | * | * | * | * | * | * | * | * | BE |
| ***** | | | | | | | | | | |
| 116 | MER144 | 30° 88'30" | -815.0000 | 118000 | 25401 | 13554 | 99000 | 2000 | 3900 | 4200 |
| | | -78° 78'30" | - | - | - | 1300 | 350 | - | - | 600 |
| | | | | | 2100 | - | - | - | - | 490 |
| 116 | MER145 | 30° 95'00" | -810.0000 | 111000 | 141000 | 14288 | 10750 | 111000 | 1900 | 3800 |
| | | -78° 35'00" | - | - | - | 1800 | 360 | - | - | 300 |
| | | | | | 1900 | - | - | - | - | 390 |
| 116 | MER146 | 30° 98'30" | -879.0000 | 136000 | 104000 | 23813 | 22902 | 89000 | 2100 | 4800 |
| | | -78° 23'30" | - | - | - | 1700 | 400 | - | - | 5300 |
| | | | | | 1500 | - | - | - | - | 1000 |
| 116 | W-A 10 | 30° 96'70" | -810.0000 | 215000 | 104000 | - | - | 116000 | - | 4500 |
| | | -78° 50'00" | - | - | - | 1447 | - | - | 6 | 7700 |
| | | | | | 2 | - | - | - | - | 900 |
| 116 | W-A 11 | 30° 96'70" | -810.0000 | 211000 | 160000 | - | - | 82400 | - | 4600 |
| | | -78° 50'00" | - | - | - | 1871 | - | - | 5 | 5800 |
| | | | | | 1 | - | - | - | - | 600 |
| 116 | W-A 12 | 30° 96'70" | -810.0000 | 185000 | 151000 | - | - | 106000 | - | 4400 |
| | | -78° 50'00" | - | - | - | 1750 | - | - | 8 | 5100 |
| | | | | | 6 | - | - | - | - | 500 |
| 116 | WHO101 | 31° 90'83" | -775.0000 | 115637 | 118198 | 10583 | 21500 | 129360 | 3596 | 3378 |
| | | -77° 41'33" | - | 31886 | 2822 | - | 1437 | - | - | 16886 |
| | | | | | 3652 | - | - | - | - | - |
| 116 | WHO102 | 31° 00'00" | -930.0000 | 104263 | 136382 | 26459 | 49544 | 82905 | 1318 | 5264 |
| | | -77° 52'50" | - | 7862 | - | - | 676 | - | - | 30154 |
| | | | | | 3652 | - | - | - | - | - |
| 116 | WHO103 | 31° 00'00" | -876.0000 | 104263 | 127990 | 28576 | 59359 | 83619 | 1019 | 6679 |
| | | -77° 52'50" | - | 2751 | 5396 | - | 845 | - | - | 24123 |
| | | | | | - | - | - | - | - | - |
| 116 | WHO104 | 30° 51'66" | -849.0000 | 104895 | 130088 | 22755 | 13554 | 160807 | 2098 | 5107 |
| | | -79° 02'16" | - | 1354 | 4317 | - | 845 | - | - | 23520 |
| | | | | | - | - | - | - | - | - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM .

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH ---(DG)--- / -1M)- / LITUDE / | MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * P * K * PB * SR * MO * AG * CD * MG * V * CR * Y * SN * TE * Pb * LA * W * GA * GE * ZR * BE * |
|---|--|
| 115 LAM071 38.0660 -3007.0000 10000 - - - - - - - - - - - - | 42000 - - - - - - - - - - - - - - - - - - |
| 115 LAM072 31.0160 -4764.0000 133000 - 206000 - - - - - - - - - - - - | 1800 2000 - - - - - - - - - - - - - - - - |
| 115 MER141 39.9500 -3710.0000 101000 169000 36514 126665 8900 5700 1200 2100 1000 - - - - - - | 860 350 - - - - - - - - - - - - - - - - |
| 115 MER147 32.170 -5290.0000 148000 93000 51861 117784 11700 3700 1400 2900 3000 - - - - - - | 580 240 - - - - - - - - - - - - - - - - |
| 115 MER148 34.8660 -11460.0000 169000 189000 13759 9347 22300 5700 9100 2700 400 - - - - - - | 1400 - - - - - - - - - - - - - - - - - - |
| 114 LAM068 32.4330 -3433.0000 144000 140000 - - - - - - - - - - - - | 2300 - - - - - - - - - - - - - - - - - - |
| 114 LAM069 32.4330 -3433.0000 119000 202000 - - - - - - - - - - - - | - |
| 114 LAM070 30.8660 -5616.0000 100000 140000 - - - - - - - - - - - - | 18000 - - - - - - - - - - - - - - - - - - |
| 113 MER151 30.8170 -3340.0000 115000 259000 26459 25706 20300 8700 7900 1600 700 - - - - - - | 900 170 - - - - - - - - - - - - - - - - |
| 113 MLL02 31.8170 -3700.0000 - - - - - - - - - - - - - - - - - - | 2000 - - - - - - - - - - - - - - - - - - |
| | 43000 - - - - - - - - - - - - - - - - - - |
| | 320 - - - - - - - - - - - - - - - - - - |
| | 9100 - - - - - - - - - - - - - - - - - - |
| | 4800 1900 1600 850 - - - - - - - - - - - - |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (M) - | * MN * FE * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * | |
|---|---------------------|-----------------|--------------------------|-------------------------------|---------------------|---------------------|
| ---(D6)--- | * K * RB * | * SR * | * MU * | * AG * | * MG * | |
| / LUNGITUDE / | * P * SN * | * TE * | * PB * | * LA * | * GA * | |
| ----- | * Y * | | | | | |
| ----- | * * | | | | | |
| 94 HERUZ2 | 24.8300 144.3800 | -5190.0000 - | 70000 47000 | 92080 186883 550 170 | 4500 1400 | 4400 4500 |
| 93 DICH07 | 27.3330 150.1660 | -5100.0000 - | 143000 164700 | - - | - - | - - |
| 93 DICH08 | 27.3330 150.1660 | -5100.0000 - | 144400 179900 | - - | - - | - - |
| 93 DICH09 | 27.3330 150.1660 | -5130.0000 - | 149000 165300 | - - | - - | - - |
| 93 FEM001 | 21.9250 158.5500 | -1320.0000 - | 151627 228992 3154 | 14129 45805 - | 18010 14567 - | 1414 10132 - |
| 93 FEM002 | 21.8200 158.8040 | -1300.0000 - | 179428 221141 3154 | - - | - - | - - |
| 93 FEM003 | 21.8340 158.6170 | -1240.0000 - | 209939 156781 3735 | 9419 34186 - | 27903 63145 - | 17081 12221 - |
| 93 FEM004 | 21.8340 158.6170 | -1240.0000 - | 175169 138825 1826 | 4604 - | 17480 - | 17796 - |
| 93 FEM005 | 21.8340 158.6170 | -1240.0000 - | 191354 168052 2573 | 9843 - | 24585 - | 17938 - |
| 93 FEM006 | 21.6170 158.6890 | -1080.0000 - | 148529 223939 2905 | 12806 44122 - | 17438 - | 26557 - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / -(M)- | * MN * FF * AL * | * SI * CA * | * TI * CU * | * NI * CU * | * ZN * |
|--|------------------|-------------|-------------|-------------|-------------|
| / LUNGITUDE / | * P * K * | * SR * MO * | * AG * CD * | * MG * V * | * CR * |
| | * Y * SN * | * TE * PB * | * LA * W * | * GA * GE * | * ZR * BE * |
| | * * | * | * | * | * |
| 93 FEMUC7 24° 9' 25.0 -132° 0.0000 170677 184064 2C797 40149 19225 21881 - 2121 - | - 3569 - - - | - - - | - - - | - 10373 - | - - |
| 93 FEMUC8 21° 32' 25.0 -132° 0.0000 362341 2020 16511 2009 8862 1079 - 5979 - | - 4067 - - - | - - - | - - - | - 39080 - | - - |
| 93 FEMUC9 21° 32' 25.0 -132° 0.0000 410431 1865 15135 2C56 9219 1438 - 12572 - | - 4815 - - - | - - - | - - - | - 39864 - | - - |
| 93 FEMUC10 21° 7' 45.0 -123° 0.0000 23231 288766 37837 136574 5789 18584 - 5910 - | - 13947 - - - | - - - | - - - | - - | - - |
| 93 FEMUC11 21° 71' 50 -120° 0.0000 89598 248269 177728 40056 12578 29015 - 12846 - | - 3320 - - - | - - - | - - - | - - | - - |
| 93 GULDC04 27° 33' 30 -52° 86.0000 143000 165000 12400 - - - 12400 2000 2000 - 4400 - | - 3900 - - - | - - - | - - - | - - | - - |
| 93 GULDC05 27° 33' 30 -52° 86.0000 144000 180000 12400 - - - 12400 2100 3200 3200 - 5600 - | - 4500 - - - | - - - | - - - | - - | - - |
| 93 GULDC06 27° 33' 30 -52° 86.0000 149000 165000 12400 - - - 12400 1600 2900 2900 - 4900 - | - 4300 - - - | - - - | - - - | - - | - - |
| 93 SCR139 26° 26' 00 153° 7' 50 122000 140000 - - - - - - - 1400 4100 2700 - | - - - - - | - - - - - | - - - - - | - - | - - |
| 93 SCR140 26° 20' 00 153° 7' 50 158000 182000 - - - - - - - 1800 5300 3500 - | - - - - - | - - - - - | - - - - - | - - | - - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (LNG) - (M) - | * MN * FE * AL * | * SI * CA * | * Ti * CO * | * NI * CU * | * ZN * |
|--|------------------|-------------|-------------|-------------|-------------|
| / LONGITUDE / | * P * K * | * SR * MO * | * AG * CD * | * MG * V * | * CR * |
| ----- | * Y * SN * | * TE * PB * | * LA * W * | * GA * GE * | * ZR * BE * |
| ----- | * * | * | * | * | * |
| 93 SKUR25 26.000 -6120.0000 160687 145894 311116 71699 15723 7014 3617 4086 | - 0 - - - | - - - | - - | - - | - |
| 92 SKUR23 24.0166 -5242.0000 172319 102042 39266 94882 23585 7313 3224 5343 | - 9215 - - - | - - - | - - | - - | - |
| 92 SKUR24 24.0950 -3951.0000 176236 112743 61229 28016 6654 4718 4871 | - 8052 - - - | - - - | - - | - - | - |
| 92 SKUR28 24.0650 -3951.0000 175920 128969 17040 54358 22084 10790 5112 4007 | - 6641 - - - | - - - | - - | - - | - |
| 91 CRUN96 27.7000 -5750.0000 202000 138700 - - - | - - - | - - | - 270 - | - 8230 - | - 8050 5230 |
| 91 NIKU17 23.9150 173.6760 - - 185000 127400 - - - | - - - | - - | - 230 - | - - | - - |
| 91 NIKU18 23.9150 173.6760 - - 187100 144700 - - - | - - - | - - | - 230 - | - - | - - |
| 91 NIKU19 23.9150 173.6760 - - 190300 135100 - - - | - 3000 - - | - - | - 230 - | - - | - - |
| 91 NIKU20 23.9150 173.6760 - - 181600 154000 - - - | - 4000 - - | - - | - 230 - | - - | - - |
| 91 NIKU21 23.9150 173.6760 - - 191500 134000 - - - | - 4200 - - | - - | - 230 - | - - | - - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (M) - | MN | FE | AL | SI | CA | Tl | CO | NI | CU | ZN |
|---|----------------------|------------|--------|--------|-------|-------|-------|-------|------|-------|
| / LONGITUDE / | P | K | RB | SK | MO | AG | CC | MG | V | CR |
| | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE |
| | * | * | * | * | * | * | * | * | * | * |
| 91 SAN 03 | 23.9160 173.6550 | -4000.0000 | 156250 | 119107 | - | - | - | 2674 | 5657 | 2C76 |
| 91 SAN 17 | 23.9990 175.6640 | -5256.0000 | 201260 | 123793 | - | - | - | - | - | - |
| 91 SAN 18 | 23.9540 170.9660 | -5817.0000 | 206631 | 132466 | 24025 | 59219 | 17224 | 1378 | 3932 | 10922 |
| 91 SKUR15 | 23.9552 173.9660 | -5817.0000 | 201963 | 119107 | 26354 | 60621 | 17581 | - | - | 14353 |
| 90 SK0R22 | 20.0450 -171.6283 | -3477.0000 | 134278 | 176738 | 15029 | 66370 | 23227 | 11090 | 4640 | 5264 |
| 89 LAM048 | 27.0000 -161.9000 | -4947.0000 | 160000 | 190000 | - | - | - | - | 2400 | 5400 |
| 89 SAN 16 | 20.0330 -161.1480 | -4740.0000 | 67250 | 105539 | - | - | - | - | - | 1728 |
| 88 LAMU42 | 24.2660 -157.9330 | -3968.0000 | 60000 | 66000 | - | - | - | - | 800 | 1800 |
| 88 LAMU43 | 27.2500 -157.3000 | -5720.0000 | 188000 | 100000 | - | - | - | - | 3200 | 5200 |
| 88 LAM044 | 29.4500 -157.0330 | -5830.0000 | 280000 | 390000 | - | - | - | - | 2200 | 13600 |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / NODULE CODE / | LATITUDE / DEPTH --(DG)-- / LNGITUDE / | FE * MN * P * Y * | AL * K * SN * | SI * SR * TE * | CA * RB * PB * | TI * MU * LA * | CC * AG * W * | NI * MU * GE * | CU * V * | ZN * CR * BE * |
|------------------------------|--|-------------------|---------------|----------------|----------------|----------------|---------------|----------------|----------|----------------|
| 88 LAMU45 ----- | 28.3300 -158.3300 | -5360.0000 | 152000 | 101000 | - | - | - | 2800 | 5600 | 3000 |
| 88 LAMU46 ----- | 28.4000 -159.1830 | -5630.0000 | 164000 | 116000 | - | - | 16000 | - | 3200 | 6200 |
| 88 LAMU47 ----- | 23.0160 -159.3500 | -4856.0000 | 4000 | 30000 | - | - | - | - | - | 2700 |
| 88 MER020 ----- | 22.0000 -150.0000 | -5240.0000 | 155000 | 142000 | 34397 | 64968 | 15000 | 25200 | 3700 | 4600 |
| 88 MURR22 ----- | 22.3500 -150.2833 | -4360.3000 | 135135 | 251169 | 24766 | 109184 | 15409 | - | - | 3300 |
| 88 SAN 15 ----- | 20.0400 -150.0670 | -5504.0000 | 172887 | 111973 | - | - | - | - | 2202 | 5893 |
| 87 CRUN34 ----- | 22.9500 -143.9760 | -4750.0000 | 106700 | 81900 | - | - | 350 | 3710 | 2250 | 8350 |
| 87 CRUN35 ----- | 22.9500 -143.9760 | -4850.0000 | 108100 | 93100 | - | - | 600 | - | - | 5590 |
| 87 HEWE04 ----- | 23.2830 -141.2160 | -5540.0000 | 100000 | 100000 | - | - | 750 | 11080 | 1620 | 8670 |
| 87 LAMU41 ----- | 21.5000 -140.0000 | -5378.0000 | 210000 | 105000 | - | - | - | - | - | 5300 |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM .

MARSDEN CODE / NUUJÉ CÓDE / LATITUDE / DEPTH
---(00)--- -(M)- / LITUDE /

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH | | DEPTH / -(M)- | | FE * AL * | | SI * CA * | | TI * CO * | | NI * CU * | | ZN * | |
|---|--------|---------------|--------------|-----------|--------|-----------|--------|-----------|-------|-----------|-------|------|------|
| / LONGITUDE / | | * P * K * | | RB * SR * | | MO * AG * | | CD * MG * | | V * | | CR * | |
| * Y * SN * | | TE * | | PB * | | LA * | | W * | | GA * | | GE * | |
| * * | | * * | | * * | | * * | | * * | | * * | | ZR * | |
| * * | | * * | | * * | | * * | | * * | | * * | | BE * | |
| * * | | * * | | * * | | * * | | * * | | * * | | * | |
| 85 | MER174 | -28° 96'70" | -125° 66'70" | - | - | 55000 | 121000 | - | - | - | 2800 | 6400 | 4200 |
| 85 | MER175 | -28° 96'70" | -125° 66'70" | - | - | 167000 | 134000 | - | - | - | 3900 | 5900 | 3800 |
| 85 | MER176 | -28° 96'70" | -125° 66'70" | - | - | 156000 | 145000 | - | - | - | 4500 | 5700 | 2900 |
| 85 | MER177 | -28° 96'70" | -125° 66'70" | - | - | 52000 | 153000 | - | - | - | 3100 | 870 | 1600 |
| 85 | MER178 | -28° 96'70" | -125° 66'73" | - | - | 43000 | 77000 | - | - | - | - | - | - |
| 85 | MER179 | -28° 96'70" | -125° 66'70" | - | - | 59000 | 122000 | - | - | - | - | 1600 | 1600 |
| 85 | MGH 31 | -21° 45'00" | -4300.0000 | 246000 | 182000 | 23000 | 70000 | 18000 | 11000 | 5000 | 4600 | 3600 | - |
| 85 | MGH 32 | -21° 45'00" | -4330.0000 | 70000 | 79000 | 63000 | 215000 | 6100 | 4000 | 700 | 3900 | 2800 | - |
| 85 | MGH 58 | -24° 36'00" | -4330.0000 | 259000 | 133000 | 28000 | 79000 | 5000 | 7000 | 3300 | 17000 | 6900 | 400 |
| 85 | SLR134 | -28° 76'30" | -123° 60'00" | - | - | 14000 | 49000 | - | - | - | - | 160 | 1000 |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (M) / LITUDE / | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * H * GA * GE * LR * BE * |
|--|---|--|---|
| 85 SKUR19 -120.7033 | 29.9466 -4050.0000 151971 140439 34357 91750 19153 4496 1337 4321 - | 8634 - 1021 - - - - - - | - 11157 - - - - - - |
| 84 BARN35 -116.1670 | 27.3330 - - 391000 91500 - - - - - - | - - - - - - - - - - | 2700 18000 8000 - - - |
| 84 BARN36 -117.2830 | 29.5170 - - 422000 144000 - - - - - - | - - - - - - - - - - | 6500 6600 900 - - - |
| 84 BARN37 -119.2830 | 27.7170 - - 270000 203000 - - - - - - | - - - - - - - - - - | 3800 2600 200 - - - |
| 84 BARN38 -119.5830 | 23.0500 - - 424000 135000 - - - - - - | - - - - - - - - - - | 6800 6800 400 - - - |
| 84 CRUN31 -117.4840 | 20.3170 -4010.0000 241300 104600 - - - - - - | - 360 - - - - - - | 2890 2580 12580 6800 - - |
| 84 CRUN89 -117.2833 | 29.5170 -600.0000 172500 127700 - - 3110 - - - - - - | - 750 - - - - - - | 8400 9330 2210 290 670 15 - |
| 84 CRUN97 -113.3000 | 24.3833 -3550.0000 339000 16900 - - 57 - - - - - - | - 680 - - - - - - | 690 100 1110 570 - - |
| 84 CRUN98 -113.2770 | 24.4000 -1950.0000 339200 19900 - - 58 - - - - - - | - 780 - - - - - - | 640 69 1100 860 310 23 - |
| 84 CRUN99 -113.4660 | 24.5070 -3510.0000 341200 11800 - - 710 - - - - - - | - 490 - - - - - - | 690 55 690 520 290 18 - |
| | | - 62 - - - - - - | |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / | MODULE CODE / | LATITUDE / | DEPTH / | MN * FE * AL * | SI * CA * | TI * CO * | NI * CU * | ZN * | |
|----------------|---------------|-------------|---------|----------------|-----------|-----------|-----------|--------|-------|
| --(10)--- | --(M)--- | * P * K * | * RB * | * SR * | * MO * | * AG * | * CC * | * CR * | |
| / LATITUDE / | ----- | * Y * SN * | * TE * | * PB * | * LA * | * W * | * MG * | * V * | |
| ----- | ----- | * Y * SN * | * TE * | * PB * | * LA * | * W * | * GE * | * ZR * | |
| ----- | ----- | * Y * SN * | * TE * | * PB * | * LA * | * W * | * GE * | * BE * | |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | |
| 84 GULD19 | -25.4500 | - | - | 224000 195000 | 3900 | - | - | 3400 | 2100 |
| | -119.6670 | | | 8500 | - | - | - | - | - |
| 84 GULD20 | -25.4500 | - | - | 227000 201000 | 3900 | - | - | 3500 | 2300 |
| | -119.6670 | | | 8900 | - | - | - | - | - |
| 84 GULD21 | -25.4500 | - | - | 188000 203000 | 3900 | - | - | 2700 | 2200 |
| | -119.6670 | | | 6700 | - | - | - | - | - |
| 84 GULD25 | -27.3330 | -44.00.0000 | 238000 | 61800 17000 | - | - | 2700 | 120 | 8900 |
| | -116.1670 | | | 2400 | - | - | - | - | - |
| 84 GULD26 | -27.3330 | -44.00.0000 | 198000 | 62800 17000 | - | - | 2700 | 140 | 7800 |
| | -116.1670 | | | 3900 | - | - | - | - | - |
| 84 GULD27 | -27.3330 | -44.00.0000 | 236000 | 82400 17000 | - | - | 2700 | 290 | 5700 |
| | -116.1670 | | | 5100 | - | - | - | - | - |
| 84 MERU33 | -22.5000 | -36.04.0000 | 288000 | 48500 38631 | 79925 | 12800 | 1600 | 260 | 4200 |
| | -113.1300 | | | - | 9500 | 650 | - | - | - |
| 84 MERU34 | -29.0500 | -400.0000 | 389000 | 8600 19051 | 41598 | 11600 | 700 | 100 | 450 |
| | -113.0500 | | | - | 9600 | 1000 | 220 | - | - |
| 84 MER131 | -22.0000 | -34.80.0000 | 278000 | 104000 | - | - | - | - | 10200 |
| | -116.2330 | | | - | - | - | - | - | - |
| 84 MER132 | -21.8330 | -34.30.0000 | 251000 | 130000 | - | - | - | - | 10200 |
| | -115.2000 | | | - | - | - | - | - | 5000 |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (M) - / LUNGITUDE / | MN | FE | AL | SI | CA | TI | CO | Ni | CU | ZN |
|---|----------|------------|--------|--------|-------|----|----|------|-------|-------|
| | P | K | RB | SR | MU | AG | CD | MG | V | CR |
| | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE |
| 84 MER133 | -21.6070 | -3800.0000 | 288000 | 99000 | - | - | - | - | 900 | 11900 |
| 84 MER134 | -21.5170 | -3800.0000 | 282000 | 81000 | - | - | - | 500 | 14600 | 7700 |
| 84 MER135 | -21.4500 | -3800.0000 | 276000 | 109000 | - | - | - | 1100 | 12300 | 6200 |
| 84 MER136 | -21.4170 | -3600.0000 | 289000 | 90000 | - | - | - | 800 | 13500 | 7200 |
| 84 MER137 | -21.5500 | -3660.0000 | 244000 | 75000 | - | - | - | 500 | 12400 | 6200 |
| 84 MER138 | -21.5000 | -3420.0000 | 289000 | 94000 | - | - | - | 700 | 12400 | 6000 |
| 84 MER139 | -21.5500 | -3450.0000 | 310000 | 83000 | - | - | - | 400 | 11000 | 4700 |
| 84 MER140 | -21.8830 | -3335.0000 | 303000 | 57000 | - | - | - | 100 | 5400 | 3100 |
| 84 MER164 | -21.9530 | -7830 | - | 363600 | 68400 | - | - | - | 1200 | 6500 |
| 84 MER165 | -21.8000 | -113.0500 | - | 372000 | 99600 | - | - | 500 | 13200 | 5600 |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (DG) / (N) / LUNGITUDE / | * Mn * Fe * Al * Si * Ca * Ti * CO * Ni * Cu * Zn * | * P * K * RB * SR * MO * AG * CC * MG * V * CR * | * Y * SN * TE * PB * LA * M * GA * GE * ZR * BE * |
|--|---|--|---|
| 84 MER106 21°56'70" -113.5000 | -346800 112800 - - - - | - - - - | - - - - |
| 84 MER167 21°55'00" -113.8000 | -292800 90000 - - - - | - - - - | -600 14900 7400 - - |
| 84 MER168 21°35'00" -114.1000 | -346800 108000 - - - - | - - - - | 1000 16200 8600 - - |
| 84 MER169 21°56'70" -114.1830 | -345600 118800 - - - - | - - - - | 1100 14300 7700 - - |
| 84 MER170 21°83'30" -115.2000 | -301200 156000 - - - - | - - - - | 1300 12200 6000 - - |
| 84 MER171 22°00'00" -116.2330 | -333600 124800 - - - - | - - - - | 1000 12200 7300 - - |
| 84 MER172 29°51'70" -117.2630 | -211000 156000 - - - - | - - - - | 7300 2200 430 - - |
| 84 MER173 23°05'00" -119.5830 | -205000 135000 - - - - | - - - - | 6200 3600 450 - - |
| 84 RAPE01 22°00'00" -3480.0000 218000 87000 16000 - - | - - - - | - - - - | 800 11500 - 260 25 - |
| 84 RAPE02 22°00'00" -3480.0000 220000 71900 16200 - - | - - - - | -136 - - | 820 12300 - 340 26 - |
| | | | 136 - - |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / NUUDLE CODE / LATITUDE / DEPTH | | MN | FE | AL | SI | CA | TI | CO | NI | CU | ZN |
|---|--------|-------------|-------------|--------|--------|-------|-----|----|------|-------|-----|
| / (M) - | | * | * | * | * | * | * | * | * | * | * |
| / LONGITUDE / | | P | K | RB | SR | MO | AG | CD | MG | V | CR |
| ----- | | * | * | * | * | * | * | * | * | * | * |
| * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * | | * | * | * | * | * | * | * | * | * | * |
| 84 | RAPE03 | -21°.63'30" | -34°30.0000 | 221000 | 88500 | 14000 | - | - | 860 | 12500 | - |
| | | -116.2330 | - | - | - | - | 139 | - | - | - | 350 |
| 84 | RAPE04 | -21°.63'30" | -34°30.0000 | 215000 | 85800 | 15200 | - | - | 880 | 12700 | - |
| | | -115.2000 | - | - | - | - | 151 | - | - | - | 330 |
| 84 | RAPE05 | -21°.63'30" | -34°30.0000 | 174000 | 139000 | 14200 | - | - | 980 | 7300 | - |
| | | -115.2000 | - | - | - | - | 254 | - | - | - | 430 |
| 84 | RAPE06 | -21°.63'30" | -34°30.0000 | 181000 | 129000 | 13500 | - | - | 1160 | 8300 | - |
| | | -115.2000 | - | - | - | - | 215 | - | - | - | 420 |
| 84 | RAPE07 | -21°.63'30" | -34°30.0000 | 176000 | 131000 | 14600 | - | - | 970 | 6900 | - |
| | | -115.2000 | - | - | - | - | 231 | - | - | - | 420 |
| 84 | RAPE08 | -21°.63'10" | -34°30.0000 | 203000 | 92100 | 15500 | - | - | 860 | 9700 | - |
| | | -114.1830 | - | - | - | - | 141 | - | - | - | 360 |
| 84 | RAPE09 | -21°.63'10" | -34°30.0000 | 238000 | 70900 | 15100 | - | - | 820 | 12200 | - |
| | | -114.1830 | - | - | - | - | 124 | - | - | - | 360 |
| 84 | RAPE10 | -21°.63'10" | -34°30.0000 | 219000 | 72100 | 13900 | - | - | 820 | 12500 | - |
| | | -114.1330 | - | - | - | - | 140 | - | - | - | 380 |
| 84 | RAPE11 | -21°.63'10" | -34°30.0000 | 229000 | 59800 | 17000 | - | - | 690 | 12500 | - |
| | | -114.1330 | - | - | - | - | 110 | - | - | - | 320 |
| 84 | RAPE12 | -21°.63'10" | -34°30.0000 | 216000 | 77000 | - | - | - | 770 | 13800 | - |
| | | -114.1330 | - | - | - | - | 118 | - | - | - | 330 |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / MODULE CODE / LATITUDE / DEPTH / DEPTH - (M) - | | CHEMICAL ANALYSES IN PPM . | | | | | | | | | | | | | | | | | | | |
|--|--------|----------------------------|------------|--------|---|--------|-------|----|---|----|---|-----|---|----|------|-------|---|-----|------|----|---|
| * | * | MN | * | FE | * | AL | * | SI | * | CA | * | Tl | * | CO | * | Ni | * | Cu | * | ZN | * |
| * | * | P | * | K | * | RB | * | SR | * | MU | * | AG | * | CE | * | MG | * | V | * | CR | * |
| * | * | Y | * | SN | * | TE | * | PB | * | LA | * | In | * | GA | * | GE | * | ZR | * | BE | * |
| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 84 | KAPE13 | -21.4500 | -300.0000 | 181000 | - | 91300 | 18800 | - | - | - | - | 135 | - | - | 560 | 12700 | - | 300 | 2200 | 25 | |
| 84 | KAPE14 | -21.4500 | -300.0000 | 183000 | - | 70500 | 28500 | - | - | - | - | 98 | - | - | 710 | 10500 | - | 320 | 2000 | 30 | |
| 84 | KAPE15 | -21.4500 | -300.0000 | 203000 | - | 88700 | 18200 | - | - | - | - | 141 | - | - | 980 | 11000 | - | 360 | 2200 | 18 | |
| 84 | KAPE16 | -21.5500 | -300.0000 | 203000 | - | 106000 | 15300 | - | - | - | - | 171 | - | - | 1000 | 10000 | - | 320 | 2200 | 21 | |
| 84 | KAPE17 | -21.5500 | -300.0000 | 179000 | - | 139000 | 11000 | - | - | - | - | 268 | - | - | 940 | 6600 | - | 480 | 1800 | 41 | |
| 84 | KAPE18 | -21.5500 | -300.0000 | 185000 | - | 114000 | 15300 | - | - | - | - | 172 | - | - | 1020 | 8800 | - | 360 | 2000 | 18 | |
| 84 | KAPE19 | -21.5500 | -3420.0000 | 221000 | - | 81900 | 15500 | - | - | - | - | 127 | - | - | 700 | 9400 | - | 410 | 2400 | 26 | |
| 84 | KAPE20 | -21.5500 | -3420.0000 | 237000 | - | 69400 | 16800 | - | - | - | - | 126 | - | - | 690 | 10300 | - | 430 | 2700 | 18 | |
| 84 | KAPE21 | -21.5500 | -3420.0000 | 230000 | - | 74800 | 15900 | - | - | - | - | 126 | - | - | 720 | 11700 | - | 410 | 2500 | 17 | |
| 84 | KAPE22 | -21.5500 | -3450.0000 | 233000 | - | 67500 | 15400 | - | - | - | - | 111 | - | - | 400 | 9300 | - | 380 | 2700 | 17 | |

CHEMICAL ANALYSES IN PPM -

CHEMICAL ANALYSES IN PPM .

| | MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (LW) / LONGITUDE / | MA | FE | AL | SI | CA | Tl | CO | NI | CU | ZN |
|----|--|----------|------------|--------|--------|----|----|----|------|-------|------|
| | | P | K | RB | SR | MO | AG | CD | MG | V | CR |
| | | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE |
| 84 | STSH41 | -21.1660 | -3480.0000 | 278000 | 104000 | - | - | - | 800 | 10200 | 6100 |
| 84 | STSH42 | -21.8320 | -3430.0000 | 251000 | 130000 | - | - | - | - | - | - |
| 84 | STSH43 | -21.8720 | -3380.0000 | 288000 | 99000 | - | - | - | 1100 | 10200 | 5300 |
| 84 | STSH44 | -21.5170 | -3800.0000 | 282000 | 81000 | - | - | - | 900 | 11900 | 6400 |
| 84 | STSH45 | -21.4520 | -3800.0000 | 276000 | 109000 | - | - | - | 500 | 14600 | 7700 |
| 84 | STSH46 | -21.3520 | -3600.0000 | 289000 | 90000 | - | - | - | 1100 | 12300 | 6200 |
| 84 | STSH47 | -21.5500 | -3650.0000 | 224000 | 75000 | - | - | - | 800 | 13500 | 7200 |
| 84 | STSH48 | -21.750 | -3420.0000 | 289000 | 94000 | - | - | - | 500 | 12400 | 6200 |
| 84 | STSH49 | -21.8000 | -3450.0000 | 310000 | 83000 | - | - | - | 700 | 12400 | 6000 |
| 84 | STSH50 | -21.8840 | -3385.0000 | 303000 | 57000 | - | - | - | 400 | 11000 | 4700 |
| | | | | | | | | | 100 | 5400 | 3100 |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / DEPTH --(DG)-- / -(M)-- / LONGITUDE / | MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | P * K * RB * SR * MO * AG * CD * MG * V * CR * | SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|--|---|--|---|
| 83 MERU35 -22.3000 -3000.0000 248000 136000 43394 136480 8700 800 170 1200 460 430 | - 15200 - 390 320 - - - - - - - - | - 460 - 190 720 87 750 11000 160 560 - - | - - - - - - - - - - - - |
| 83 WILL08 -22.3000 -2999.0000 - 18000 - 259000 259000 190 - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 79 LAM065 -25.1000 -5868.0000 125000 208000 - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 79 LAMU66 -20.3500 -5722.0000 130000 226000 - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 79 LAMU67 -20.8160 -4873.0000 84000 257000 - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 79 MER149 -28.0830 -5760.0000 189000 15400 37573 57490 12700 6000 3300 5700 2600 710 | - 4900 - 800 380 1000 - - - - - - | - 1000 1600 - - - - - - | - - - - - - - - - - - - |
| 79 MER152 -20.4000 -5520.0000 129000 198000 34927 65903 10700 6200 2400 2700 1900 430 | - 4200 - - - - - - - - - - | - 880 300 - - - - - - | - - - - - - - - - - - - |
| 79 SGG 01 -25.0000 -5729.0000 193500 284200 - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 79 SGG 02 -25.0000 -5729.0000 175200 316100 - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |
| 79 SGG 03 -25.0000 -5729.0000 132100 349600 - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - | - - - - - - - - - - - - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(M)- | * MN * FE * AL * SI * CA * TI * CO * NI * CU * | * ZN * |
|---|---|-------------------------------------|
| / LONGITUDE / | * P * K * SR * MO * AG * CD * NG * V * | * CR * |
| * | * Y * SN * TE * PB * LA * W * GA * GE * | * LR * BE * |
| ***** | ***** | ***** |
| 77 LAM058 -46.0160 | 23.7060 -3155.0000 104000 190000 - - - - - | 3800 - 1800 1200 - - - |
| 75 MURK01 -20.2060 | 25.7500 -3620.0000 180274 230102 18521 28043 19773 - - - | - - - - - 4956 - - - |
| 75 MURK02 -20.2060 | 25.7500 -3620.0000 160306 16600 289481 11906 31128 28726 - - - | - - - - - 5438 - - - |
| 68 GTC 01 47.3660 | 12.7330 -1280.0000 177000 16600 - - - - - | 44402 660 - - - |
| 68 GTC 02 47.6500 | 12.5500 -2550.0000 370000 13000 - - - - - | 44402 910 - - - |
| 68 GTC 03 47.6500 | 12.5500 -2550.0000 264000 12000 - - - - - | 65435 620 - - - |
| 68 GTC 04 47.6500 | 12.5500 -2550.0000 322000 13000 - - - - - | 32717 50 - - - |
| 68 GTC 05 47.6500 | 12.5500 -2550.0000 336000 15000 - - - - - | 38794 490 - - - |
| 60 MER036 126.4500 | 13.8200 -1910.0000 149000 184000 149000 1640 30164 65435 13700 8700 - - - | 1100 3700 - 710 170 2900 2900 - - - |
| 59 SAN 08 138.8450 | 13.3200 -3806.0000 125878 16365 - - - - - | - - - - - - - - - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NOODLE CODE / LATITUDE / DEPTH / (D) - (M) - | * MN * FE * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * | | | | | | |
|---|---------------------|--------------------|----------------|-------------|-------------|-------------|------------|-----------|---------------|---------------|------|
| LONGITUDE / | * K * RB * | * SR * | * MU * AG * | * CC * | * MG * | | | | | | |
| | * SN * | * TE * | * PB * | * LA * | * GE * | | | | | | |
| 59 SKUR17 | 15.5315 134.4960 | -3290.0000 - | 141671 6309 | 194432 - | 63472 - | 15794 - | 7433 - | - | 3928 10795 | - | - |
| 58 SKJRD | 17.0030 141.7200 | -4620.0090 - | 50568 2096 | 189956 - | 45193 - | 124375 - | 21941 - | 9412 - | 786 - | 471 603 | - |
| 57 BARN34 | 15.5600 150.1070 | - | - | 272000 - | 184000 - | - | - | - | - | 3500 4200 | 2000 |
| 57 LAM039 | 18.0830 152.9500 | -5218.0000 - | 146000 - | 150000 - | - | - | - | - | 3400 5000 | - | 3200 |
| 57 SAN31 | 13.4470 159.9600 | -2638.0000 2009 | 185209 6558 | 123304 - | 32387 - | 51320 - | 12149 - | 4136 - | 2831 - | 5579 16283 | 3035 |
| 56 BARN29 | 12.0000 165.0060 | - | - | 384000 - | 160000 - | - | - | - | 8400 - | - | 1100 |
| 56 BARN30 | 12.0000 165.0060 | - | - | 455000 - | 130000 - | - | - | - | 7900 - | - | 1200 |
| 56 BARN31 | 12.0000 165.0000 | - | - | 433000 - | 131000 - | - | - | - | 11200 - | - | - |
| 56 BARN32 | 12.0000 165.0000 | - | - | 342000 - | 78500 - | - | - | - | 2600 - | 10400 | 900 |
| 56 BARN33 | 12.0000 165.0000 | - | - | 503000 - | 158000 - | - | - | - | 15000 - | - | 900 |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(N)- / -(D)- | MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | P * K * RB * SR * MU * AG * CD * MG * V * CR * | Y * SN * TE * PB * LA * N * GA * GE * ZR * BE * |
|--|---|--|---|
| 56 CRON87 13.0000 -1830.0000 194000 135300 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 DICH19 11.9500 -1370.0000 185800 172000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 DICH20 11.9500 -1370.0000 152200 156400 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 DICH21 11.9500 -1370.0000 176200 145000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 GOL007 12.0000 -4600.0000 186000 172000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 GOL008 12.0000 -4600.0000 152000 156000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 GUL009 12.0000 -4600.0000 176000 145000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 GULD28 12.0000 -1880.0000 242000 158000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 GULD29 12.0000 -1880.0000 232000 159000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |
| 56 GULD30 12.0000 -1880.0000 235000 151000 - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - |

CHEMICAL ANALYSES IN PPM .

CHEMICAL ANALYSES IN PPM -

| MARDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(H) - | | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
|---|--------|-----------|---------|------------|--------|--------|--------|---|-----|-------|------|------|----|------|------|-------|------|------|-----|---|----|
| --(U) | --(U) | * | MN | * | FE | * | AL | * | SI | * | CA | * | Tl | * | CO | * | Ni | * | Cu | * | ZN |
| / | / | * | P | * | K | * | RB | * | SR | * | MO | * | AG | * | CD | * | MG | * | V | * | CR |
| ----- | ----- | * | Y | * | SN | * | TE | * | PB | * | LA | * | W | * | GA | * | GE | * | ZR | * | BE |
| 54 | BARN26 | -171.0000 | 19.4170 | - | - | 274000 | 162000 | - | - | - | - | - | - | - | 6100 | 9000 | 1400 | - | - | - | |
| 54 | BARN27 | -174.3700 | 17.8500 | - | - | 359000 | 159000 | - | - | - | - | - | - | - | 7000 | 5600 | 500 | - | - | - | |
| 54 | BARN28 | -177.2000 | 17.1170 | - | - | 354000 | 159000 | - | - | - | - | - | - | - | 7400 | 6600 | 900 | - | - | - | |
| 54 | CRUN73 | -170.9500 | 10.3833 | -4469.0000 | 170100 | 145400 | - | - | - | 11100 | 6920 | 7700 | - | 6920 | 7700 | 6310 | 6310 | 490 | 2 | - | |
| 54 | CRUN74 | -170.9500 | 10.3833 | -4469.0000 | 191800 | 119800 | - | - | - | 390 | - | - | - | - | 6980 | 4580 | 6200 | 7190 | 370 | 5 | |
| 54 | CRUN75 | -170.9500 | 10.3833 | -4469.0000 | 199700 | 162400 | - | - | 920 | - | - | 320 | - | - | 6980 | 4580 | 6200 | 7190 | 370 | - | |
| 54 | CRUN76 | -172.1000 | 10.3833 | -5106.0000 | 206300 | 137200 | - | - | 530 | - | - | 350 | - | - | 9940 | 8770 | 9360 | 6900 | 530 | 2 | |
| 54 | CRUN77 | -172.7840 | 11.2170 | -5380.0000 | 171200 | 148000 | - | - | 310 | - | - | 320 | - | - | 9440 | 4330 | 4040 | 2410 | 380 | - | |
| 54 | CRUN78 | -172.8166 | 11.2170 | -4437.0000 | 122000 | 131400 | - | - | 470 | - | - | 440 | - | - | 5980 | 4300 | 4890 | 2700 | 390 | 6 | |
| 54 | CRUN79 | -172.8800 | 12.2670 | -2703.0000 | 130200 | 160300 | - | - | 280 | - | - | 190 | - | - | 6720 | 3580 | 5520 | 4930 | 310 | - | |
| | | | | | | | | - | - | - | - | - | - | - | 390 | 12590 | 8960 | 3100 | 500 | 4 | |
| | | | | | | | | - | - | - | - | - | - | - | 820 | - | - | 750 | - | - | |

CHEMICAL ANALYSES IN PPM -

| MARDEN CODE / NODULE CODE / LATITUDE / DEPTH / -(DG)--- | | MN | FE | AI | SI | CA | Ti | CC | Ni | CU | * ZN * |
|---|--------|-----------|------------|--------|--------|------|------|------|-------|-------|--------|
| / LONGITUDE / --- | | P | K | RB | SR | MU | AG | CD | MG | V | * CR * |
| | | Y | SN | TE | PB | LA | W | GA | GE | ZR | * BE * |
| ***** | | | | | | | | | | | |
| 54 | CRUN80 | -145.5170 | -5464.0000 | 156500 | 128800 | - | - | 360 | - | 5320 | 4330 |
| 54 | CRUN84 | -149.0000 | -1464.0000 | 122800 | 116800 | - | 53 | - | - | - | 540 |
| 54 | CRUN85 | -174.2500 | -196.0000 | 111300 | 144900 | - | 730 | 480 | 15380 | 11720 | 4730 |
| 54 | CRUN86 | -177.1670 | -2016.0000 | 149700 | 132700 | - | 1910 | 280 | 8200 | 8850 | 2260 |
| 54 | CRTH10 | -172.5170 | - | 158500 | 128800 | - | 370 | 8710 | 8840 | 3390 | 920 |
| 54 | DICHO6 | -171.0000 | -155.0000 | 222000 | 132000 | - | 1770 | - | - | - | 560 |
| 54 | DICHI3 | -177.2500 | - | - | - | - | - | - | 7210 | 5320 | 4330 |
| 54 | DICHI4 | -177.2500 | -1330.0000 | 214000 | 128600 | - | - | - | - | - | - |
| 54 | DICHI5 | -177.2500 | -1830.0000 | 225800 | 126000 | - | - | - | - | 6400 | 6500 |
| 54 | GOLD10 | -19.3830 | -1410.0000 | 192000 | 182000 | 2700 | - | - | 12500 | 5100 | 3600 |

CHEMICAL ANALYSES IN PPM -

| NARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / DEPTH ---(DG)--- / (M)--- | | MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | P * K * RB * SR * MU * AG * CO * MG * V * CR * | Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|--|---------|--|--|---|
| 54 | GULD1 | 19.3830 -1410.0000 170000 171000 2700 - - - - | - - - - | - 12500 5200 2900 2300 - |
| 54 | GULD12 | 19.3830 -1410.0000 145000 150000 2700 - - - - | - - - - | - 12500 3600 2700 1800 - |
| 54 | GULD22 | 17.6670 - - 214000 129000 3900 - - - - | - - - - | - 8100 6100 6000 4200 - |
| 54 | GULD23 | 17.6670 - - 226000 126000 3900 - - - - | - - - - | - 8100 6400 6500 5200 - |
| 54 | GULD24 | 17.6670 - - 191000 147000 3900 - - - - | - - - - | - 8100 3800 4800 4800 - |
| 54 | HEWF03 | 17.8000 -1810.0000 100000 100000 - - - - | - 30000 70000 - 15000 - | - - - - 30000 15000 - |
| 54 | LAM035 | 12.9830 -5546.0000 196000 136000 - - - - | - - - - | - - - - 3100 5900 4600 - |
| 54 | LAM036 | 12.0160 -5280.0000 173000 152000 - - - - | - - - - | - - - - 1600 2000 2800 - |
| 54 | MERR038 | 17.0700 -2000.0000 130000 107000 22226 41131 84800 100000 4500 4700 1900 570 - | - 43000 1380 - 1700 490 - - | - - - - - - - - |
| 54 | MERR039 | 17.8000 -2000.0000 144000 140500 17992 49544 68500 8900 7000 2900 720 400 - | - 820 3900 - 1900 - 1400 430 - | - - - - - - - - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / | LATITUDE / DEPTH | * FE * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * |
|------------------------------|---------------------|----------------|----------------|-------------|-------------|--------|
| --(DG)-- / - (M) - | * Mn * K * | * SR * | * MO * | * AG * | * MG * | * V * |
| / LONGITUDE / | * P * K * | * RB * | * CD * | * GE * | * ZR * | * CR * |
| ----- | * Y * SN * | * TE * | * PB * | * GA * | * BE * | |
| ----- | * Y * SN * | * TE * | * PB * | * GA * | * GE * | |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 54 MELK40 | -18.3300 -3860.0000 | 131000 -146000 | 227555 -1200 | 10577 15100 | 4200 - | 3000 - |
| | -173.3800 | - | -2200 | 270 | - | 1700 - |
| 54 NLRL41 | 19.0500 -1372.0000 | 227000 133000 | 227555 226641 | 22400 11300 | 9500 - | 1500 - |
| | -171.0000 | 740 3800 | 1400 2300 | 710 | - | 1500 - |
| 54 SAN 04 | 15.7140 -2370.0000 | 164612 149251 | 15505 46646 | 18653 - | 3617 1964 | 958 - |
| | -174.0500 | 1747 - | - | - | 10674 - | - |
| 54 SAN 05 | 15.7140 -2370.0000 | 175478 139530 | 10001 35288 | 19797 - | 3853 2435 | 1118 - |
| | -174.0500 | 2446 - | - | - | 9770 - | - |
| 54 SAN 06 | 15.7140 -2370.0000 | 157205 135963 | 24078 60014 | 19296 - | 3381 2121 | 1357 - |
| | -174.0500 | 2140 - | - | - | 9106 - | - |
| 54 SAN 27 | 12.9650 -2140.0000 | 222554 84067 | 45711 26459 | 17653 - | 4325 6286 | 1118 - |
| | -176.1109 | 742 7395 | - | - | 12363 - | - |
| 54 SK120 | 17.8500 -174.3700 | - | 171000 -217000 | - | - | 280 - |
| | -171.0000 | - | - | - | 5600 - | - |
| 54 ST3H56 | 19.0500 -1372.0000 | 227000 133000 | - | 1400 710 | 11300 - | 1500 - |
| | -171.0000 | - | -2300 | - | - | 1500 - |
| 53 BARN22 | 18.7830 -162.0500 | - | 342000 186000 | - | - | 4400 - |
| | -162.0500 | - | - | - | - | 4400 - |
| 53 BARN23 | 19.3830 -162.1670 | - | 295000 201000 | - | - | 3300 - |
| | -162.1670 | - | - | - | - | 3300 - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / MODULE COJÉ / LATITUDE / DEPTH / (M) / DEPTH / (M) | * NH * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MU * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|---|---|--|---|
| 53 LAM034 -165.8660 -5295.0000 168000 - | - - - - - | - - - - - | - - - - - |
| 53 MER042 -169.7300 -11740.0000 205000 145009 10054 - | 3227179 20700 11300 - | 1500 600 - | 5500 4200 - |
| 53 MER043 -165.7500 -2400.0000 160000 172000 - | 16934 59827 20100 8400 - | 1200 250 - | 7300 2500 - |
| 53 MER044 -163.1700 -5413.0000 185000 170000 - | 40219 88338 16400 5300 - | 1200 310 - | 3100 8600 - |
| 53 MER045 -161.1300 -5352.0000 233000 92000 - | 32281 56067 14900 7500 - | 800 530 - | 3100 9800 - |
| 53 SCR124 -165.5500 -10.5600 - | - - - - - | - - - - - | - - - - - |
| 53 SCR125 -169.7330 -19.1170 - | - - - - - | - - - - - | - - - - - |
| 52 BARN20 -158.2330 -19.1000 - | - - - - - | - - - - - | - - - - - |
| 52 BARN21 -158.4500 -18.3500 - | - - - - - | - - - - - | - - - - - |
| 52 CRUN41 -152.9340 -11.8500 - | - - - - - | - - - - - | - - - - - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (M) | MN | FE | AL | SI | CA | Tl | CC | NI | CU | ZN |
|---|-----------|------------|--------|--------|-------|--------|-------|-------|-------|-------|
| ----- / LUNGITUD / | * | * | * | * | * | * | * | * | * | * |
| ----- | * | P | K | RB | SR | MO | AG | CC | MG | V |
| ----- | * | * | * | * | * | * | * | * | * | CR |
| ----- | * | Y | SN | TE | PB | LA | In | GA | GE | ZR |
| ----- | * | * | * | * | * | * | * | * | * | BE |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 52 CRUN42 | 11.85C0 | -5221.0000 | 165100 | 110500 | - | - | 6360 | 4610 | 6120 | 4610 |
| 52 CRUN43 | 11.85C0 | -5221.0000 | 168100 | 131800 | - | 290 | - | - | - | 470 |
| 52 CRTHC9 | 11.85C0 | -5221.0000 | 109600 | 69200 | - | 490 | 21500 | 4380 | 3600 | 3560 |
| 52 LAMU31 | 13.7330 | -5218.0000 | 175000 | 42500 | - | - | - | 8000 | 5390 | 5740 |
| 52 LAMU32 | 10.3660 | -5233.0000 | 196000 | 124000 | - | - | - | - | - | - |
| 52 LAMU38 | 14.80C0 | -5460.0000 | 180000 | 192000 | - | - | 20000 | - | 3700 | 7400 |
| 52 MURK14 | 14.3466 | -5480.0000 | 204531 | 157848 | 17198 | 132274 | 14270 | - | - | 4500 |
| 52 SAN26 | 11.2320 | -5142.0000 | 201575 | 93230 | 23178 | 53003 | 18796 | 5935 | 2595 | 6364 |
| 52 SKUF01 | 19.9160 | -5043.0000 | 171916 | 143586 | 27677 | 62210 | 17867 | 10551 | 5269 | 3514 |
| 51 CRUN40 | 14.9160 | -5339.0000 | 194500 | 106100 | - | - | - | 9720 | 1820 | 3720 |
| | -144.90C0 | - | - | - | - | - | 370 | - | 710 | - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH | * MN * FE * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * |
|---|----------------------|----------------------|------------------|----------------------|---|
| --(UG)--- / -141.4-- | * K * SR * MU * | * AG * | * CD * | * MG * | * V * |
| LATITUDE / | * P * K * | * RB * | * AG * | * MG * | * CR * |
| ----- | * Y * SN * | * TE * | * PB * | * GA * | * GE * |
| ----- | * Y * SN * | * TE * | * PB * | * LA * | * ZR * |
| ----- | * Y * SN * | * TE * | * PB * | * W * | * BE * |
| ***** | ***** | ***** | ***** | ***** | ***** |
| 50 BARN19 | 10.4330 -130.6330 | - - 390000 | - - - | - - - | 1300 - 22600 15000 |
| 50 CRUN28 | 15.9060 -133.9340 | -4036.0000 205200 | 135700 - - | - 460 1300 | 12600 3250 - 6640 1980 400 |
| 50 CRUN29 | 18.4670 -131.7666 | -2210.0000 242600 | 95800 - - | - 520 940 | 4770 - - 2190 1C920 7450 310 |
| 50 CKTH08 | 14.9170 -133.4830 | - - 211700 | 106400 - - | - - - | - - 2950 - - 10600 6810 |
| 50 LAM021 | 11.4000 -132.1130 | -4343.0000 285000 | 5000 - - | - 7000 - - | - - - 2400 13400 13200 - - |
| 50 LAM022 | 10.7500 -139.4600 | -4770.0000 208000 | 74000 - - | - 15000 - - | - 3000 - - 13600 6800 - - |
| 50 LAM023 | 11.0160 -139.9660 | -4877.0000 305000 | 60000 - - | - 14000 - - | - - - 3200 16200 - - |
| 50 MER047 | 13.1200 -138.9300 | -4927.0000 250000 | 51000 - - | - 26989 - - | - 13900 630 380 3100 - - 3300 15000 - - 13100 1200 - |
| 50 MER048 | 13.1200 -138.9300 | -4927.0000 236000 | 79000 - - | 20109 - - | 51413 800 470 15700 4800 - - 3400 9800 - - 8600 1000 - |
| 50 MER049 | 16.2500 -137.1600 | -4953.0000 100000 | 89000 - - | 28047 - - | 137415 700 150 8000 20000 - - 4600 4000 - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NUMBER CODE / | LATITUDE / DEPTH | * MN * FE * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * |
|------------------------------|------------------|--------------------|-------------|-------------|-------------|--------|
| --(DG)-- | -41M)- | * K * RB * | * SR * | * MO * | * AG * | * MG * |
| / LNGTHUE / | ----- | * Y * SN * | * TE * | * PB * | * LA * | * GA * |
| * | * | * | * | * | * | * |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 50 | MERU5C | 14.3700 -4816.0000 | 229000 | 92000 | 28576 | 701C9 |
| | | -133.1200 | - | 7799 | - | 790 |
| | | | | | 370 | 370 |
| | | | | - | 1200 | - |
| 50 | MERU6B | 10.4330 -4890.0000 | 227000 | 76000 | 33339 | 73381 |
| | | -130.6330 | 520 | 8600 | - | 14600 |
| | | | | - | 730 | 590 |
| | | | | - | 750 | - |
| 50 | MGH 2 | 16.2500 -4553.0000 | 265000 | 98000 | 39000 | 84000 |
| | | -137.1000 | - | 4000 | - | 17000 |
| | | | | 130 | - | 640 |
| | | | | - | 510 | - |
| 50 | MGH 3 3 | 10.4330 -4890.0000 | 316000 | 59000 | 26000 | 75000 |
| | | -130.6330 | - | 7000 | - | 18000 |
| | | | | 86 | - | 900 |
| | | | | - | 440 | - |
| 50 | SCK122 | 14.6200 -135.0670 | - | 7500 | 46000 | - |
| | | | | - | - | - |
| 50 | SCK123 | 16.2500 -137.1000 | - | 10000 | 89000 | - |
| | | | | - | - | - |
| 49 | CK0N25 | 15.0660 -4500.0000 | 231900 | 59500 | - | - |
| | | -125.0834 | - | - | - | 3590 |
| | | | | - | 460 | - |
| 49 | LAM018 | 12.2660 -4471.0000 | 315000 | 50800 | - | 2320 |
| | | -120.1660 | - | - | - | 19110 |
| | | | | - | 300 | - |
| 49 | LAM019 | 16.5830 -4369.0000 | 220000 | 86000 | - | - |
| | | -125.5830 | - | - | - | 3000 |
| 49 | LAM020 | 10.6160 -4636.0000 | 296000 | 39000 | - | - |
| | | -128.9000 | - | - | - | 2200 |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(DG)--- / LONGITUDE / | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * SR * MO * AG * CD * MG * V * CR * | * SN * TE * PB * LA * W * GA * GE * ZR * BE * | * Y * |
|--|--|--|---|---|
| 49 MER051 -16.0000 -4354.0000 | 238000 - 8800 33668 - 780 74316 - 490 4400 - 2700 12200 - 10500 1400 - | - - 820 - - - 3300 - 3900 11500 - 12500 1100 - | - - - 520 - - - 4000 11600 - 8700 1000 - | - - - - - 3600 10900 - 7600 860 - |
| 49 MER052 -14.9170 -4270.0000 | 224000 - 8200 32281 - 740 17251 - 1900 3300 - 3900 11500 - 12500 1100 - | - - 1100 - - - 520 - - - - - | - - - 520 - - - 4000 11600 - 8700 1000 - | - - - - - 3600 10900 - 7600 860 - |
| 49 MER053 -19.0000 -4138.0000 | 224000 - 7400 95000 30693 - 900 68707 - 13400 5200 - 4000 11600 - 8700 1000 - | - - - 1400 - - - - - - - | - - - 520 - - - 4000 11600 - 8700 1000 - | - - - - - 3600 10900 - 7600 860 - |
| 49 MER054 -19.8170 -4320.0000 | 214000 - 890 96000 37573 - 920 78523 - 12700 5900 - 3600 10900 - 7600 860 - | - - - 1200 - - - - - - - | - - - 460 - - - - - - - | - - - - - 3600 10900 - 7600 860 - |
| 49 MER069 -13.0500 -4440.0000 | 222000 - 9800 63000 39689 - 9800 97219 - 11800 3800 - 3200 10600 - 10600 880 - | - - - 1200 - - - - - - - | - - - 410 - - - - - - - | - - - - - 3600 10900 - 7600 860 - |
| 49 MER070 -15.0000 -4380.0000 | 222000 - 6900 97000 28047 - 960 58892 - 14200 7400 - 3800 10000 - 10000 810 - | - - - 1700 - - - - - - - | - - - 540 - - - - - - - | - - - - - 3600 10900 - 7600 860 - |
| 49 MER162 -15.0000 -4330 | - 240000 - 83000 - 100000 - - - - - - - | - - - - - - - - - - - | - - - - - - - - - - - | - - - - - 3400 12300 - 9500 - |
| 49 MER163 -10.3080 -125.4330 | - - 189000 - - - - - - - | - - - - - - - - - - - | - - - - - - - - - - - | - - - - - 3600 10600 - 10600 - |
| 49 MGH 28 -16.0330 -4350.0000 | 329000 - 80000 70000 30000 70000 14000 3700 - 2500 17000 19000 7 7 - | - 40 - - - - - - - - - | - 510 900 - - - - - | - 7 7 - 410 - |
| 49 MGH 29 -13.0500 -4440.0000 | 278000 - 14000 46000 112000 9000 2900 1000 - 10000 20000 600 30 - | - - - 14000 - 380 - - - | - - - 990 - 280 - - - | - 30 30 - 240 - |

CHEMICAL ANALYSES IN PPM

| MARDEN CODE / MODULE CODE / LATITUDE / DEPTH / (UG) - / LUNGITUDE / | FE * MN * P * Y * | AL * K * SN * | SI * RB * TE * | CA * SR * PB * | Ti * MO * LA * | CC * AG * h * | CD * MG * GA * | Ni * MG * GE * | CU * V * ZR * | ZN * |
|---|-------------------|---------------|----------------|----------------|----------------|---------------|----------------|----------------|---------------|---------|
| 49 SAN 13 -120.2900 | 185398 -10294 | 104000 - | 36400 - | 80299 - | 17295 - | 7014 - | - | 4714 - | 4712 - | - |
| 49 SCR102 -125.4530 | 240000 - | 83000 - | - | 54000 - | 15000 - | - | 3400 - | 12300 - | 9500 - | - |
| 49 SCR103 -125.4500 | 189000 - | 100000 - | - | 81000 - | 18000 - | - | 3600 - | 10600 - | 10600 - | - |
| 49 SKUR14 -121.9070 | 235107 -1572 | 82878 - | 27994 - | 65669 - | 17581 - | 3477 - | 4404 - | 9429 - | 19480 - | - |
| 48 CRUN32 -117.2000 | 268400 - | 103000 - | - | - | 800 - | - | 3430 - | 830 - | 18900 - | 10640 - |
| 48 LAMU17 -113.8830 | - | 227000 - | 95000 - | - | 360 - | - | - | - | 3600 - | 7600 - |
| 48 MER055 -114.7330 | - | - | - | - | - | - | - | - | - | - |
| 48 MER056 -114.2060 | - | 120000 - | 25401 - | 59359 - | 15000 - | 4800 - | 2200 - | 9300 - | 6100 - | 830 - |
| 48 MER057 -113.8000 | - | 6000 - | 6500 - | 1000 - | 470 - | - | - | - | - | - |
| 48 MER058 -113.8500 | - | - | - | 980 - | - | - | - | - | - | - |
| 47 bARKN16 -108.7500 | - | - | 232000 - | 115000 - | 26459 - | 61229 - | 14400 - | 3600 - | 2300 - | 10900 - |
| | | | - | 19051 - | 42065 - | 17900 - | 6600 - | 2100 - | 10100 - | 6600 - |
| | | | | - | 4800 - | 1100 - | 610 - | - | - | 860 - |
| | | | | - | - | 1200 - | - | - | - | - |
| | | | | - | - | - | - | 1000 - | 8000 - | 6600 - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NOUVELLE CODE / LATITUDE / DEPTH / (DG) / (M) / LONGITUDE / | * PH * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * SN * TE * PB * LA * W * GA * GE * ZR * BE * | * Y * * |
|--|--|--|---|------------------------------------|
| 47 MER058 -10°.8830 -32°75.CCCC -10°.1160 | 34000 155000 66149 1332C8 29700 14C0 300 - 360 - 780 190 | - 6500 - 900 - - - - | - 1700 1200 126000 2200 130 - 450 - 760 - 570 | - - - - - - - - - - |
| 47 MICK059 -11°.8330 -33°00.0000 -10°.8300 | 17000 63000 36514 111241 126000 820 - - - - | - 6500 - 820 - - - - | - 1200 180 - - - - | - - - - - - - - - - |
| 46 LAMU78 -10°.6160 -38°19.0000 -9°.3160 | 3200 13600 - - - - | - - - - - - - - | - 288000 - - - - | - 100 - 100 - - - |
| 40 LAMU57 -17°.9000 -48°68.0000 -31°.9500 | 152000 238000 - - - - | - - - - - - - - | - 15000 - - - - | - 3000 - 1700 - 1200 - - |
| 31 CR0104 2.7660 -19C0.0000 59.8670 | 143600 143600 - - - - | - 26000 - 350 - - - - | - 210 - 740 - - - - | - 7550 - 4870 - 2510 - 280 - - |
| 31 CR0105 2.7660 -19C0.0000 59.8670 | 153600 130300 - - - - | - 25000 - 570 - - - - | - 210 - 740 - - - - | - 9400 - 5310 - 1940 - 310 - - |
| 31 CR0106 2.7660 -19C0.0000 59.8670 | 138200 142100 - - - - | - 23000 - 570 - - - - | - 290 - 740 - - - - | - 11100 - 6550 - 2680 - 200 - - |
| 31 CR0107 2.7660 -19C0.0000 59.8670 | 155000 206300 - - - - | - 73000 - 350 - - - - | - 1030 - 290 - - - - | - 111700 - 4480 - 750 - 360 - 9 |
| 31 CR0108 2.7850 -1780.0000 59.8670 | 128300 175400 - - - - | - 138000 - 350 - - - - | - 230 - 320 - - - - | - 7900 - 2400 - 2380 - 730 - 22 - |
| 31 CR0109 2.7850 -1780.0000 59.8670 | 144500 195100 - - - - | - 135000 - 350 - - - - | - 210 - 410 - - - - | - 8240 - 2490 - 2270 - 1340 - 13 - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / NODULE CODE | LATITUDE / DEPTH ---(M)--- | FE | AL | SI | CA | Tl | CU | NI | CU | ZN |
|----------------------------|-------------------------------|--------|--------|--------|--------|-----|-------|-------|------|------|
| 31 CRUT10 59.8670 | 2.7850 -1780.0000 | 133300 | 180200 | - | 157000 | 240 | 8050 | 2780 | 2930 | 1610 |
| 31 CRUT11 59.8670 | 2.7850 -1780.0000 | 129000 | 173900 | - | 80000 | 530 | 6700 | 3380 | 3270 | 600 |
| 31 CRUT12 59.8670 | 2.7850 -1780.0000 | 125100 | 169100 | - | 139000 | 270 | - | - | - | 16 |
| 31 CRUT13 57.4100 | 2.7850 -1780.0000 | - | - | 184100 | 163500 | - | 46000 | 9660 | 3260 | 3760 |
| 31 CRUT14 59.8670 | 2.7850 -1780.0000 | 166400 | 176000 | - | 6700 | 280 | - | 17600 | 4100 | 1320 |
| 31 CRUT15 59.8670 | 2.7850 -1780.0000 | 125200 | 143500 | - | 124000 | 360 | - | 7360 | 3220 | 1320 |
| 31 CRUT16 59.8670 | 2.7850 -1780.0000 | 145200 | 179000 | - | 72000 | 300 | - | 7590 | 2670 | 3300 |
| 31 CRUT17 59.8670 | 2.7850 -1780.0000 | 152000 | 182300 | - | 55000 | 350 | - | 7190 | 2820 | 3800 |
| 31 CRUT18 59.8670 | 2.7850 -1780.0000 | 153100 | 182100 | - | 73000 | 370 | - | 8940 | 2710 | 3940 |
| 31 CRUT19 59.8670 | 2.7850 -1780.0000 | 98700 | 135800 | - | 201000 | 340 | - | 6590 | 2410 | 3680 |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NODULE CUVE / LATITUDE / DEPTH ---(DG)--- / -(M)- | * MN * FE * AL * SI * CA * TI * CC * NI * CU * ZN * | * CR * V * GE * ZR * BE * |
|--|---|---------------------------|
| * P * K * RB * SR * MU * AG * CC * MG * V * CR * | - | - |
| * Y * SN * TE * PB * LA * In * GA * GE * ZR * BE * | - | - |
| ***** | ***** | ***** |
| 31 CROT20 2.7850 -1780.0000 116400 132800 - 164000 - 5700 1600 - 1140 1770 - 20 - | - | - |
| 31 CROT21 2.7850 -1780.0000 111900 159100 - 161000 - 520 - 5990 1760 - 3350 1600 - 24 - | - | - |
| 31 CRUT22 2.7850 -1780.0000 116900 166000 - 205000 - 310 - 6850 1320 - 1260 1860 - 17 - | - | - |
| 30 CRUT01 2.7500 -2000.0000 199500 95500 - 61000 - 470 - 3350 1770 11190 1780 - 5 - | - | - |
| 30 CROT02 2.7500 -2000.0000 199900 82500 - 36000 - 290 - 1870 1500 12700 1490 - 5 - | - | - |
| 30 CRUT03 2.7500 -2000.0000 258000 77900 - 28000 - 500 - 1790 860 14200 2760 - 6 - | - | - |
| 30 CROT23 2.7500 -2000.0000 154900 175900 - 98000 - 300 - 8960 1610 1860 5000 1110 - 7 - | - | - |
| 30 CROT24 2.7500 -2000.0000 167400 157700 - 63000 - 430 - 4950 2090 - 5000 1180 - 5 - | - | - |
| 30 CROT25 2.7500 -2000.0000 166700 157600 - 7700 - 450 - 6330 2180 - 6330 1540 - 7 - | - | - |
| 30 CROT26 2.7500 -2000.0000 144600 138700 - 145000 - 300 - 7070 200 - 3630 1480 - 14 - | - | - |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NODULE CODE / LATITUDE / LONGITUDE / DEPTH / (US) - (MI) - | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
|---|---|--------|-----|-----|-----|-------|---|-------|---|------|---|------|---|-------|---|---|---|---|---|---|---|---|
| 30 CROUT7 2°75'00" -2000.0000 155200 158900 | - | 114000 | - | 180 | - | 6820 | - | 1630 | - | 2680 | - | 1320 | - | - | - | - | - | - | - | - | - | |
| 30 CRUIT8 6°75'00" -2000.0000 150900 120900 | - | - | 170 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 30 CRUIT9 6°75'00" -2000.0000 151200 157600 | - | 103000 | - | 640 | - | 7160 | - | 1860 | - | 4440 | - | 1360 | - | - | - | - | - | - | - | - | - | |
| 30 CRUIC0 6°91'70" -4793.0000 172500 132700 | - | - | - | 350 | - | 2320 | - | 640 | - | 8140 | - | 2640 | - | 510 | - | - | - | - | - | - | - | |
| 30 CRUIC1 6°18'33" 6°60'10" -2176.0000 138200 197800 | - | - | 520 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 30 CRUIC2 6°56'70" -2331.0000 165900 224800 | - | - | - | 610 | - | 6870 | - | 4140 | - | 2820 | - | 290 | - | 690 | - | - | - | - | - | - | - | |
| 30 CTM101 2°75'00" -3359.0000 373479 | - | - | - | - | 420 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 30 CTM102 2°75'00" -3359.0000 5244 195272 | - | - | - | - | - | 23585 | - | 5455 | - | 4168 | - | - | - | - | - | - | - | - | - | - | - | |
| 30 WILL10 6°91'70" -4793.0000 189000 | - | 189000 | - | - | - | - | - | 22441 | - | 1558 | - | 314 | - | - | - | - | - | - | - | - | - | |
| 30 WILL11 6°91'70" -4793.0000 177000 | - | 177000 | - | - | - | 83000 | - | 480 | - | 3600 | - | 2100 | - | 12000 | - | - | - | - | - | - | - | |
| | | | | | | 77000 | - | 590 | - | 3600 | - | 1600 | - | 7300 | - | - | - | - | - | - | - | |
| | | | | | | | - | - | - | - | - | - | - | 19000 | - | - | - | - | - | - | - | |

CHEMICAL ANALYSES IN PPM

 MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / -(N)- /
 - (D) -- / LONGITUDE /

| | * | MN | * FE | * AL | * SI | * CA | * TI | * CO | * NI | * CU | * ZN | | |
|----|--------|--------------------------------|------------|--------|--------|--------|-------|-------|------|------|------|------|------|
| | * | P | * K | * RB | * SR | * MU | * AG | * CD | * MG | * V | * CR | | |
| | * | Y | * SN | * TE | * PB | * LA | * W | * GA | * GE | * ZR | * BE | | |
| | * | * | * | * | * | * | * | * | * | * | * | | |
| 30 | WILL12 | 6° 91' 70" N 07° 78' 30" E | -4793.0000 | - | 170000 | - | 84000 | - | 570 | - | 1700 | 8100 | 3800 |
| 30 | WILL13 | 6° 91' 70" N 07° 78' 30" E | -4793.0000 | - | 143000 | - | 95000 | - | 540 | - | 1500 | 9500 | 4000 |
| 23 | NIKU11 | 4° 93' 40" N 135° 48' 30" E | - | - | 264100 | 97000 | - | 74000 | - | - | - | 7500 | - |
| 23 | NIKU12 | 4° 93' 40" N 135° 48' 30" E | - | - | 192600 | 122800 | - | 63800 | - | - | - | 7000 | - |
| 23 | NIKU13 | 4° 93' 40" N 135° 48' 30" E | - | - | 146200 | 163000 | - | 63400 | - | - | - | 4000 | - |
| 23 | NIKU14 | 4° 93' 40" N 135° 48' 30" E | - | - | 264100 | 89300 | - | 54100 | - | - | - | 8500 | - |
| 23 | NIKU15 | 4° 93' 40" N 135° 48' 30" E | - | - | 198100 | 138400 | - | 55600 | - | - | - | 6500 | - |
| 23 | NIKU16 | 4° 93' 40" N 135° 48' 30" E | - | - | 171300 | 156800 | - | 67700 | - | - | - | 6000 | - |
| 23 | SKOKO4 | 4° 95' 00" N 135° 48' 35" E | -4850.0000 | 190889 | 120016 | 26248 | 71558 | 20083 | 4736 | 1966 | - | 6522 | - |
| 23 | SKOKO5 | 4° 95' 00" N 135° 48' 35" E | -4850.0000 | 163630 | 148062 | 19527 | 64594 | 15651 | 5695 | 1415 | - | 4243 | - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / | MODULE CODE / | LATITUDE / | DEPTH -(M)- | FE * | AL * | SI * | CA * | TI * | CO * | NI * | CU * | ZN * |
|----------------|---------------|------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| --(DG)-- | --(M)-- | * P * | * K * | * RB * | * SR * | * MU * | * AG * | * CC * | * MG * | * V * | * CR * | * |
| / LUNGITUDE / | | * Y * | * SN * | * TE * | * PB * | * LA * | * W * | * GA * | * GE * | * LR * | * BE * | * |
| ----- | | * * | * * | * * | * * | * * | * * | * * | * * | * * | * * | * |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 20 | SAN 30 | 7° 65' 80" | -49° 16.00' 00" | 145293 | 96307 | 36303 | 88652 | 23799 | 5035 | 1415 | 4479 | 2636 |
| | | 101.9300 | 1834 | 7471 | - | - | - | - | - | 15861 | - | - |
| 19 | LAM014 | 9° 28' 30" | -5° 42' 1.00' 00" | 160000 | 139003 | - | - | - | - | 2900 | 4000 | 3500 |
| | | 178.9500 | - | - | - | - | - | - | - | - | - | - |
| 19 | LAM015 | 8° 31' 60" | -5° 09' 7.00' 00" | 172000 | 108000 | - | - | - | - | 3700 | 10400 | 6000 |
| | | 176.4160 | - | - | - | - | - | - | - | - | - | - |
| 19 | LAM016 | 7° 46' 60" | -4° 59' 1.00' 00" | 146000 | 156000 | - | - | - | - | 2100 | 4200 | 3200 |
| | | 174.8860 | - | - | - | - | - | - | - | - | - | - |
| 18 | CR0N54 | 8° 12' 00" | -5° 35.00' 00" | 157800 | 128100 | - | - | 280 | 7120 | 2120 | 5450 | 3290 |
| | | -177.1666 | - | - | - | 250 | - | - | - | - | - | 14 |
| 18 | CR0N55 | 7° 31' 66" | -5° 19.0.00' 00" | 178000 | 147800 | - | - | 380 | 9820 | 4580 | 6940 | 3460 |
| | | -175.4766 | - | - | - | 1220 | - | - | - | - | - | 2 |
| 18 | CR0N56 | 7° 31' 66" | -5° 19.0.00' 00" | 189500 | 128600 | - | - | 320 | 7870 | 5580 | 8250 | 8020 |
| | | -175.4766 | - | - | - | 130 | - | - | - | - | - | 2 |
| 18 | CR0N57 | 7° 31' 66" | -5° 19.0.00' 00" | 179800 | 170800 | - | - | 280 | 5300 | 6890 | 7120 | 7940 |
| | | -175.4766 | - | - | - | 740 | - | - | - | - | - | 2 |
| 18 | CR0N58 | 9° 81' 70" | -4° 75.00' 00" | 209400 | 130300 | - | - | 490 | 9920 | 2930 | 6680 | 4330 |
| | | -170.9840 | - | - | - | - | - | 330 | - | - | - | 4 |
| 18 | CR0N59 | 9° 81' 70" | -4° 75.00' 00" | 181600 | 133300 | - | - | 390 | 6850 | 4960 | 8600 | 6930 |
| | | -170.9840 | - | - | - | 560 | - | - | - | - | - | 6 |

CHEMICAL ANALYSES IN PPM.

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***** MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (DG)---(M)---(LNG)---(LAT)
***** MN * FE * AL * SI * CA * TI * CO * NI * CL * ZN *
***** P * K * RB * SR * MU * AG * CD * MG * V * CR *
***** Y * SN * TE * PB * LA * h * GA * GE * ZR * BE *
***** *

```

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULÉ CODE / LATITUDE / DEPTH / (DUG) - (M) - | MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | P * K * RB * SR * MO * AG * CD * MG * V * CR * | Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|---|---|--|---|
| / LONGITUDE / | | | |
| 18 SCR118 | 9.8170 -170.9830 | - 191000 105000 | - - - - |
| 18 SCR119 | 9.8170 -170.9830 | - 150000 102000 | - - - - |
| 18 SCR120 | 8.6170 -176.3000 | - 61000 113000 | - - - - |
| 18 SCR121 | 8.1250 -177.2060 | - 176000 100000 | - - - - |
| 17 CRUN50 | 9.9500 -167.8200 | - 227500 94300 | - 540 - |
| 17 CRUN51 | 9.3333 -168.8333 | - 5240.0000 204100 95100 | - 470 - 500 - |
| 17 CRUN52 | 9.0000 -169.0000 | - 5170.0000 165100 167300 | - 420 - 450 - |
| 17 CRUN72 | 8.2070 -168.8670 | - 4397.0000 183800 120400 | - 370 - 360 - |
| 17 LAMC10 | 9.9830 -168.7000 | - 5222.0000 112000 66000 | - 480 - 4400 - |
| 17 MtkU61 | 7.7830 -168.0000 | - 4994.0000 202000 138000 17463 | - 1200 43935 17300 12300 |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH | FE | AL | SI | CA | Tl | CO | Ni | Cu | ZN |
|---|------------|------------|--------|--------|--------|--------|--------|--------|--------|
| ---(M)--- / ---(D)--- | * MN * K * | * RB * | * SR * | * MU * | * AG * | * CD * | * MG * | * V * | * CR * |
| ----- / LONITUDE / ----- | * P * SN * | * TE * | * PB * | * LA * | * W * | * GA * | * GE * | * ZR * | * BE * |
| ----- | * Y * | * * | * * | * * | * * | * * | * * | * * | * * |
| ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 17 SCR117 | 9.1330 | - | - | 186000 | 93000 | - | - | 2300 | 6200 |
| | -168.0830 | | | - | - | - | - | - | 3100 |
| 16 CRUN36 | 9.4500 | -5100.0000 | 54100 | 105000 | - | 1420 | 1250 | 4090 | 4510 |
| | -150.7000 | | | - | 90 | - | - | - | -120 |
| 16 CRUN44 | 8.9500 | -4839.0000 | 226100 | 109400 | - | 650 | 10770 | 4090 | 13300 |
| | -152.8760 | | | - | 820 | - | - | - | 7800 |
| 16 CRUN45 | 8.9500 | -4839.0000 | 130400 | 126700 | - | 200 | 3670 | 1910 | 560 |
| | -152.8760 | | | - | 370 | - | - | - | - |
| 16 CRUN46 | 8.3333 | -5143.0000 | 248900 | 73100 | - | 570 | 5550 | 2530 | 18550 |
| | -153.0000 | | | - | 420 | - | - | - | 16460 |
| 16 CRUN47 | 8.3333 | -5143.0000 | 256300 | 62000 | - | 280 | 3630 | 1380 | 15000 |
| | -153.0000 | | | - | 320 | - | - | - | -230 |
| 16 CRUN48 | 8.3333 | -5143.0000 | 267300 | 65700 | - | 300 | 3090 | 1730 | 16460 |
| | -153.0000 | | | - | 340 | - | - | - | -310 |
| 16 LAM076 | 9.7000 | -4803.0000 | 190000 | 134000 | - | - | - | 2900 | 8100 |
| | -151.4000 | | | - | - | - | - | - | 4400 |
| 16 LAM077 | 4.8160 | -5332.0000 | 210000 | 172000 | - | - | - | - | - |
| | -152.0160 | | | - | - | - | - | - | - |
| 16 SAN25 | 7.9220 | -5160.0000 | 254465 | 57910 | 31699 | 63519 | 29302 | 4676 | 1258 |
| | -153.0920 | | 1179 | 8717 | - | - | - | - | 5264 |
| | | | | - | - | - | - | - | 15896 |
| | | | | - | - | - | - | - | 15896 |
| | | | | - | - | - | - | - | 19419 |
| | | | | - | - | - | - | - | - |

CHEMICAL ANALYSES IN PPM .

| MARDEN CODE / MODULE CODE / LATITUDE / DEPTH / (DG) / (M) / LONGITUDE / | | MN | FE | AL | SI | CA | Tl | CO | Ni | CU | ZN |
|---|--------|-----------|------------|--------|--------|-------|-------|-------|------|------|-------|
| | | P | K | RB | SR | MU | AG | CD | MG | V | CR |
| | | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE |
| ***** | | | | | | | | | | | |
| 16 | SCR114 | -150.5830 | - | 172000 | 140000 | - | - | - | 1700 | 5500 | 4300 |
| 16 | SCR115 | -150.7000 | - | 35000 | 83000 | - | - | - | - | - | - |
| 16 | SCR116 | -153.0530 | - | 2600 | 12000 | - | - | - | 250 | 2500 | 2000 |
| 15 | CRUN37 | -149.9000 | -5073.0000 | 236300 | 93400 | - | - | - | - | - | - |
| 15 | CRUN38 | -149.9000 | -5073.0000 | 139600 | 212800 | - | - | - | 120 | 400 | 700 |
| 15 | CRUN39 | -148.8760 | -5036.0000 | 201100 | 120500 | - | - | - | - | - | - |
| 15 | LAMU09 | -149.6160 | -5073.0000 | 170000 | 101000 | - | - | - | - | - | - |
| 15 | MER071 | -145.3000 | -5400.0000 | 262000 | 53000 | 26989 | 63566 | 14500 | 3100 | 2600 | 15200 |
| 15 | SCR112 | -142.7000 | - | 1000 | 16000 | - | - | - | - | - | - |
| 15 | SCR113 | -148.2000 | - | 172000 | 48000 | - | - | - | - | - | - |

CHEMICAL ANALYSES IN PPM

| | MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (DO) - (W) - LONGITUDE / | MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | P * K * RB * SR * MO * AG * CD * MG * V * CR * | Y * SN * TE * PB * LA * W * GA * GE * LR * BE * |
|----|--|---|--|---|
| 14 | BARN16 -137.7830 | - 485000 33800 - | - | - 1500 24600 15400 - |
| 14 | BARN17 -137.7830 | - 315000 900 - | - | - 1200 15300 9200 - |
| 14 | CRUN27 -130.8000 -417.0000 245600 43600 - | - 97 - 360 - 1790 1200 15150 12270 - | - | - 430 9 - |
| 14 | CRUN30 -136.1200 -4600.0000 143000 173600 - | - 50 - 630 - 8470 3930 7550 4080 - | - | - 770 9 - |
| 14 | CRUN49 -137.1834 -4930.0000 234600 54100 - | - 430 - 720 - 3180 1350 19300 15900 - | - | - 430 15 - |
| 14 | HEWE01 -137.7840 -4930.0000 100000 70000 - | - 70000 30000 - 3000 15000 15000 - | - | - |
| 14 | LAMU05 -136.3830 -4823.0000 218000 58000 - | - 430 - 720 - 3180 1350 19300 15900 - | - | - |
| 14 | LAMU06 -137.6830 -4660.0000 25000 82000 - | - 70000 67000 - 3000 15000 15000 - | - | - |
| 14 | LAMU07 -139.6830 -5086.0000 168000 - | - 67000 - 3000 15000 15000 - | - | - |
| 14 | LAMU08 -139.6830 -5086.0000 60000 116000 - | - 14000 - 3000 15000 15000 - | - | - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(M)- / LUNGITUDE / | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|--|---|--|---|
| 14 MERU63 -137.7830 -4930.0000 258000 48000 30164 60761 14700 4400 2000 - 13600 12000 1200 - | - 520 - 7900 - - 550 - - - - | - 110000 320000 530000 75000 180000 43000 1800 120000 170000 140000 4200 400 - | - 510 - - - 7 - 7 350 - |
| 14 MGH 31 -137.7830 -4930.0000 381000 443000 1 - 1 512 - - - 21 - - - | - 110 - - - - - - - | - 443000 166000 16600 140000 1100 - 2500 170000 21 - | - 2500 170000 121000 - 1409 - |
| 14 WA 13 -137.7830 -4920.0000 62000 - 1 - - - - - - - - | - - - - - - - - | - 62000 62000 140000 1100 - 2600 160000 27000 170000 520 - | - 2600 170000 121000 - 1409 - |
| 14 WILLC9 -137.7830 -4919.0000 - - - - - - - - - - | - - - - - - - - | - - - - - - - - | - - - - - - - - |
| 13 LAM002 -120.1330 -3389.0000 200000 - - - - - - - - | - - - - - - - - | - - - - - - - - | - 2500 7400 10000 - - |
| 13 LAM003 -122.9500 -4508.0000 264000 480000 - - - - - - - | - - - - - - - - | - - - - - - - - | - 800 12600 10800 - - |
| 13 LAM004 -125.3330 -4610.0000 300000 - - - - - - - | - - - - - - - - | - - - - - - - - | - 1400 13300 12700 - - |
| 13 LA4075 -128.4160 -4574.0000 316000 80000 - - - - - - - | - - - - - - - - | - - - - - - - - | - 3600 14200 13000 - - |
| 13 MERU64 -125.6170 -4416.0000 93000 92000 46040 143491 7200 1800 900 4000 5500 930 - | - 205000 - 800 - 430 - - - | - 800 - - - - | - 3600 14200 13000 - - |
| 13 MERU65 -125.3330 -4360.0000 281000 630000 22226 58424 15100 1800 1800 11600 13600 1500 - | - 72000 - 580 - 470 - - - | - 580 - - - - | - 3600 14200 13000 - - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH | | MN | FE | AL | SI | CA | Ti | CO | Ni | CU | N | ZN |
|---|--------|---------------------|--------------------|----------------|----------------|------------|---------------|--------------|-----------|-----------|-----------|-------------|
| ---(DG)--- | | * | * | * | * | * | * | * | * | * | * | * |
| -(M)- | | * | * | * | * | * | * | * | * | * | * | * |
| / LONGITUDE / | | P | K | RB | SR | MO | AG | CD | MG | V | * | CR |
| ----- | | * | * | * | * | * | * | * | * | * | * | * |
| * | | Y | SN | TE | PB | LA | W | GA | GE | ZR | * | BE |
| * | | * | * | * | * | * | * | * | * | * | * | * |
| ***** | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 9 | MER067 | -6.3500 -81.7330 | -1001.0000 2530 | 151000 4000 | 177000 - | 22755 - | 72446 1500 | 17000 370 | 4700 - | 3600 - | 2500 - | 500 - |
| 8 | WA 32 | -5.7330 -79.3330 | -3330.0000 - | 115000 - | 123000 - | - 1 | - 212 | - 1C900 | - - | - 500 | - 1800 | 100 - |
| 3 | MER153 | -6.1330 -21.1170 | -7180.0000 - | 107000 - | 161000 4100 | 40219 - | 132741 820 | 9800 300 | 4200 - | 3000 - | 2400 - | 1400 - |
| 2 | LAM056 | 0.3500 -17.5160 | -1712.0000 - | 173000 - | 148000 - | - - | - - | - - | - - | 3200 - | 2800 - | 600 - |
| ANJNO 1 | - | - | - | 242000 - | 140000 - | 29000 - | - 900 | - 520 | 6700 - | 3500 - | - 9900 | 5300 540 |
| COLL01 | - | - | -5011.0000 87 | 149128 3329 | 192055 - | 54031 - | 74924 - | 6575 - | 3956 - | - - | - 1085 | 159 - |
| DERY01 | - | - | -150.0000 5110 | 184198 3931 | 60148 - | 35615 - | 121243 - | 1429 - | 3417 - | - - | - 361 | - - |
| DERY02 | - | - | -136.0000 - | 194814 4193 | 65743 - | - - | - - | - - | - - | - - | - 5669 | - - |
| DERY03 | - | - | -136.0000 - | 172634 4193 | 51545 - | 19739 - | 107174 - | 16080 - | 4795 - | - - | - 6272 | - - |
| DERY04 | - | - | -83.0000 1878 | 20347 - | 122744 - | 1322 - | 303809 - | 4659 - | 0 - | - - | - - | - - |

CHEMICAL ANALYSES IN PPM.

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (M) | DEPTH / (M) | FE * MN * P * Y * | AL * K * SN * | SI * SR * TE * | CA * AG * PB * | II * MG * LA * | CO * CD * W * | Ni * GE * | CU * GA * | ZN * CR * BE * |
|---|-------------|-------------------|---------------|----------------|----------------|----------------|---------------|-----------|-----------|----------------|
| DERY05 | - - - | -160.0000 | 15987 3494 | 167750 - | 90228 - | 167314 - | 30017 - | - | - | - |
| DERY06 | - - - | -104.0000 | 37155 5547 | 141488 - | 57894 - | 121336 - | 10863 - | - | - | 14474 - |
| DICHO1 | - - - | - - | 232000 2200 | 96000 - | 15900 - | 40600 - | 22100 2000 | 5500 - | 5000 - | 6300 11500 |
| DICHO2 | - - - | - - | 205000 - | 124000 - | - - | - - | - - | - | 5900 - | 4200 - |
| ELWAO1 | - - - | - - | 56686 1878 | 124143 17268 | 64826 - | 155410 169 | 72899 133 | 9292 - | 1687 - | 3378 1597 |
| ELWAO2 | - - - | - - | 115385 - | 193733 1328 | 56095 - | 123860 - | 11649 - | - | - | - |
| ELWAO3 | - - - | - - | - | 446054 - | 16980 - | - | 9768 - | 40023 - | - | - |
| GURSH1 | - - - | - - | - | 155604 6464 | 154986 - | 7250 - | 108203 - | 11077 - | - | 11217 - |
| GURSH2 | - - - | - - | - | 164445 12186 | 147503 - | 20480 - | 91189 - | 285 - | - | 8322 - |
| GURSH3 | - - - | - - | - | 86890 15506 | 151699 - | 19897 - | 62725 - | 23227 - | - | 10192 - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM -

```

***** MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH ****
* MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN *
* P * K * RB * SR * ND * AG * CD * MG * V * CR *
* SN * TE * PB * LA * W * GA * GE * ZR * BE *
* Y * *
***** LUNGITUDE / ****

```

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / DEPTH --(LOG)-- - (M) - / LUNGITUDE / | MN | FE | AI | SI | CA | Tl | CO | NI | CU | ZN |
|--|----|----|----|--------|--------|-------|----|------|----|------|
| RAAB05 | - | - | - | 243000 | 92500 | 41100 | - | 440 | - | 2900 |
| RAAB06 | - | - | - | 239000 | 133000 | 27500 | - | 625 | - | - |
| RAAB07 | - | - | - | 267000 | 97400 | 29600 | - | 760 | - | 3000 |
| RAAB08 | - | - | - | 247000 | 135000 | 24100 | - | 625 | - | 2700 |
| RAAB09 | - | - | - | 260000 | 73100 | 31100 | - | 830 | - | 3600 |
| RAAB10 | - | - | - | 150000 | 99500 | 46400 | - | 455 | - | 2500 |
| RAAB11 | - | - | - | 361000 | 21000 | 27000 | - | 695 | - | 2100 |
| RAAB12 | - | - | - | 247000 | 83400 | 36400 | - | 85 | - | 170 |
| RAAB13 | - | - | - | 193000 | 167000 | 20500 | - | 620 | - | 9500 |
| RAAB14 | - | - | - | 219000 | 91800 | 34100 | - | 1005 | - | 1200 |

CHEMICAL ANALYSES IN PPM -

| MARSDEN CODE / NOUVELLE CÔTE / LATITUDE / DEPTH ---(DG)--- / ---(M)--- | LATITUDE / LONGITUDE / | DEPTH / | * Mn * Fe * Al * Si * Ca * Ti * Cu * Ni * Cu * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * Sn * Te * Pb * La * W * Ga * Ge * ZR * BE * |
|---|------------------------|---------|---|--|---|
| | | | * | * | * |

| RAAB15 | - - - | - - - | - 286000 - 68900 - 27200 - - 650 - - 2600 - 13900 - 12000 - 1600 - | - - - | - - - |
|--------|-------|-------|---|-------|-------|
| RAAB16 | - - - | - - - | - 235000 - 100000 - 40000 - - 675 - - 3600 - 9800 - 5700 - 1400 - | - - - | - - - |
| RAAB17 | - - - | - - - | - 255000 - 76300 - 29100 - - 955 - - 375 - - 3500 - 11100 - 6600 - 1500 - | - - - | - - - |
| RAAB18 | - - - | - - - | - 289000 - 59900 - 26600 - - 775 - - 520 - - 3300 - 13000 - 5500 - 2100 - | - - - | - - - |
| RAAB19 | - - - | - - - | - 275000 - 76100 - 29800 - - 590 - - 455 - - 2400 - 15500 - 8400 - 1500 - | - - - | - - - |
| RAAB20 | - - - | - - - | - 263000 - 73000 - 27900 - - 620 - - 465 - - 2100 - 11000 - 8200 - 2000 - | - - - | - - - |
| RAAB21 | - - - | - - - | - 312000 - 53000 - - 540 - - 630 - - 2300 - 17000 - 13200 - 1800 - | - - - | - - - |
| RAAB22 | - - - | - - - | - 271000 - 86000 - - 490 - - 435 - - 3700 - 11000 - 5800 - 1400 - | - - - | - - - |
| RAAB23 | - - - | - - - | - 290000 - 34000 - - 760 - - 465 - - 1400 - 19400 - 14600 - 2000 - | - - - | - - - |
| RAAB24 | - - - | - - - | - 268000 - 88200 - - 500 - - 795 - - 4400 - 14000 - 7600 - 1500 - | - - - | - - - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / NOUVELLE CODE / LATITUDE / DEPTH ---(Deg)--- / LONGITUDE / | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|---|---|--|---|
| Raab25 | - - - - - 263000 144500 - - - 1080 - - - | - - - 595 - - - - - | - 3900 7700 - 3100 - 810 - |
| Raab26 | - - - - - 337000 50000 - - - 520 - - - | - - - 745 - - - - - | - 2300 13600 - 10500 - 2000 - |
| Raab27 | - - - - - 241000 131500 - - - 1170 - - - | - - - 445 - - - - - | - 5000 6900 - 3100 - 950 - |
| Raab28 | - - - - - 283000 423000 - - - 420 - - - | - - - 720 - - - - - | - 1500 16900 - 13200 - 1700 - |
| Raab29 | - - - - - 253000 121000 21800 - - - 925 - - - | - - - 420 - - - - - | - 4200 9200 - - - - |
| Raab30 | - - - - - 265000 42700 - - - 410 - - - | - - - 630 - - - - - | - 1300 18000 - 13800 - 1500 - |
| Raab31 | - - - - - 236000 157000 15300 - - - 1060 - - - | - - - 900 - - - - - | - 4000 7400 - - - - |
| Raab32 | - - - - - 244000 133000 22200 - - - 565 - - - | - - - 565 - - - - - | - 4300 8600 - - - - |
| Raab33 | - - - - - 301000 30600 36300 - - - 895 - - - | - - - 990 - - - - - | - 1100 21600 - 14600 - 1600 - |
| Raab34 | - - - - - 273000 119000 20300 - - - 325 - - - | - - - 325 - - - - - | - 4100 10000 - 5500 - 1120 - |

CHEMICAL ANALYSES IN PPM.

| MARDEN CODE / MODULE CODE / LATITUDE / DEPTH / -(M)- | * MN * FE * AL * | * SI * CA * | * TI * CJ * | * NI * CU * | * ZN * | |
|--|------------------|-----------------|-------------|-------------|--------------|---------|
| ----- / LUNGITUDE / ----- | * P * K * | * RB * SR * | * MO * AG * | * CD * MG * | * V * CR * | |
| ----- | * V * SN * | * TE * PB * | * LA * m * | * GA * GE * | * ZR * BE * | |
| Raab35 | - - - - | 3C7CC0 1C1CC0 | 244C0 - | - 770 - | - 4000 13300 | 8200 - |
| Raab36 | - - - - | - 269000 91600 | 23600 - | - 800 - | - - | - - |
| Raab37 | - - - - | - 235000 35000 | 54800 - | - 720 - | - 3500 - | 11200 - |
| Raab38 | - - - - | - 249000 34900 | 49500 - | - 195 - | - 660 - | 6900 - |
| Raab39 | - - - - | - 229000 34400 | 49800 - | - 250 - | - - | 1440 - |
| Raab40 | - - - - | - 279000 98900 | 22400 - | - 205 - | - - | - - |
| Raab41 | - - - - | - 257000 58100 | 34500 - | - 745 - | - 850 - | 12500 - |
| Raab42 | - - - - | - 253000 115000 | 26100 - | - 585 - | - 3100 - | 12600 - |
| Raab43 | - - - - | - 197000 71300 | 47900 - | - 470 - | - 2000 - | 11100 - |
| Raab44 | - - - - | - 261000 141000 | 17700 - | - 530 - | - 3300 - | 9400 - |
| | | | | - 830 - | - 1700 - | 13400 - |
| | | | | - 500 - | - 4000 - | 6800 - |
| | | | | - 590 - | - 8300 - | 10000 - |
| | | | | - 427 - | - 4000 - | 4000 - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (UG) / - (H) / - LUNGITUDE / ----- | * MN * FE * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * |
|--|-------------------|-----------------|-----------------|----------------|----------------|
| RAAB45 | - - - - - 2860000 | 36100 - - - - - | 32100 - - - - - | 830 - - - - - | 1400 - - - - - |
| RAAB46 | - - - - - 2500000 | 86500 - - - - - | 27200 - - - - - | 1115 - - - - - | 3500 - - - - - |
| RAAB47 | - - - - - 2480000 | 97800 - - - - - | 68600 - - - - - | 730 - - - - - | 4000 - - - - - |
| RAAB48 | - - - - - 2430000 | 63500 - - - - - | 48000 - - - - - | 820 - - - - - | 2600 - - - - - |
| RAAB49 | - - - - - 1990000 | 41400 - - - - - | 51300 - - - - - | 520 - - - - - | 1500 - - - - - |
| RAAB50 | - - - - - 2730000 | 45800 - - - - - | 31400 - - - - - | 445 - - - - - | 2400 - - - - - |
| RAAB51 | - - - - - 2600000 | 79600 - - - - - | 60900 - - - - - | 290 - - - - - | 3500 - - - - - |
| RAAB52 | - - - - - 2840000 | 29700 - - - - - | 34200 - - - - - | 705 - - - - - | 1500 - - - - - |
| RAAB53 | - - - - - 2700000 | 31600 - - - - - | 39000 - - - - - | 250 - - - - - | 735 - - - - - |
| RAAB54 | - - - - - 2690000 | 32600 - - - - - | 38900 - - - - - | 260 - - - - - | 260 - - - - - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (UG) / (M) | * MN * FE * AL * SI * CA * Ti * CO * Ni * CU * ZN * | * P * K * RB * SK * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * N * GA * GE * ZR * BE * |
|--|---|--|---|
| RAAAb65 | - - - - - 289000 54000 - - - - - | - - - - - 642 - - - - - | - - - - - 2600 15600 10800 1600 - - |
| RAAAb66 | - - - - - 276000 77000 - - - - - | - - - - - 570 - - - - - | - - - - - 2100 13100 11600 1500 - - |
| RAAAb67 | - - - - - 283000 77000 - - - - - | - - - - - 530 - - - - - | - - - - - 2800 11600 7700 1200 - - |
| RAAAb68 | - - - - - 3400000 60000 - - - - - | - - - - - 882 - - - - - | - - - - - 2800 14300 11200 1400 - - |
| RAAAb69 | - - - - - 3020000 86000 - - - - - | - - - - - 485 - - - - - | - - - - - 2800 10600 8500 1500 - - |
| RAAAb70 | - - - - - 3210000 43000 - - - - - | - - - - - 739 - - - - - | - - - - - 2500 10400 8800 2600 - - |
| RAAAb71 | - - - - - 3140000 97000 - - - - - | - - - - - 365 - - - - - | - - - - - 3300 10800 7000 1400 - - |
| RAAAb72 | - - - - - 3360000 33000 - - - - - | - - - - - 812 - - - - - | - - - - - 1400 9500 13200 2400 - - |
| RAAAb73 | - - - - - 3190000 77000 - - - - - | - - - - - 298 - - - - - | - - - - - 655 - - - - - |
| RAAAb74 | - - - - - 2830000 84000 - - - - - | - - - - - 730 - - - - - | - - - - - 2800 12500 9300 1700 - - |

CHEMICAL ANALYSES IN PPM

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (M) | MN | FE | AL | SI | CA | Tl | CO | Ni | CU | ZN | | |
|---|----|----|----|--------|-------|-------|-----|-----|------|-------|-------|-------|
| RAAB85 | - | - | - | 266000 | 81CC0 | - | 562 | - | 2400 | 11700 | 7800 | 1500 |
| RAAB86 | - | - | - | 348000 | 31000 | - | 497 | - | - | - | - | - |
| RAAB87 | - | - | - | 272000 | 55100 | 34900 | - | 628 | - | 1400 | 13400 | 12000 |
| RAAB88 | - | - | - | 328000 | 44200 | 26800 | - | 678 | - | 1800 | 14500 | 10500 |
| RAAB89 | - | - | - | 300000 | 62800 | 30200 | - | 702 | - | 1600 | 12200 | 12800 |
| RAAB90 | - | - | - | 283000 | 41200 | 38100 | - | 342 | - | 2000 | 12600 | 11400 |
| RAAB91 | - | - | - | 277000 | 57400 | 35000 | - | 815 | - | 2600 | 12600 | 13400 |
| RAAB92 | - | - | - | 328000 | 42700 | 28300 | - | 408 | - | 1900 | 11400 | 10800 |
| RAAB93 | - | - | - | 285000 | 39600 | 39400 | - | 620 | - | 2000 | 12100 | 12900 |
| RAAB94 | - | - | - | 268000 | 44100 | 41100 | - | 640 | - | 1700 | 14700 | 14400 |
| | | | | | | | - | 665 | - | - | - | - |
| | | | | | | | - | 310 | - | - | - | - |
| | | | | | | | - | 655 | - | - | - | - |
| | | | | | | | - | 280 | - | - | - | - |
| | | | | | | | - | 645 | - | - | - | - |
| | | | | | | | - | 325 | - | - | - | - |

CHEMICAL ANALYSES IN PPM

| MARSDEN CODE / NUNAVUT CODE / LATITUDE / DEPTH / -(M)- | * MN * FE * AL * SI * CA * TI * CO * NI * CU * ZN * | * P * K * RB * SR * MO * AG * CD * MG * V * CR * | * Y * SN * TE * PB * LA * W * GA * GE * ZR * BE * |
|--|---|--|---|
| LATITUDE / | - (DD) - | - (MM) - | - |
| RAAb95 | - - - | - - - | - 299000 55300 35400 - |
| RAAb96 | - - - | - 273000 60100 36400 - | - 335 - 630 - |
| RAAb97 | - - - | - 286000 51800 32900 - | - 365 - 595 - |
| RAAb98 | - - - | - 148000 19900 36200 - | - 375 - 660 - |
| RAAb99 | - - - | - 284000 45600 37800 - | - 285 - 680 - |
| RAAl00 | - - - | - 305000 34500 35800 - | - 315 - 660 - |
| RAAl01 | - - - | - 331000 33900 28100 - | - 240 - 645 - |
| RAAl02 | - - - | - 338000 27300 27700 - | - 190 - 760 - |
| RAAl03 | - - - | - 294000 63500 30800 - | - 705 - 790 - |
| RAAl04 | - - - | - 306000 62100 29700 - | - 390 - 840 - |
| | | | - 425 - |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH ---(M)--- / ---(DG)--- / LUNGITUDE / | * Mn * Fe * Al * Si * Ca * Ti * Co * Ni * Cu * ZN * | * Mn * Fe * Al * Si * Ca * Ti * Co * Ni * Cu * ZN * |
|---|--|--|
| RAA105 | - - - - - 283000 41200 38100 - - - 640 - - - 2600 12600 13400 1200 - - | - - - - - 283000 41200 38100 - - - 640 - - - 2600 12600 13400 1200 - - |
| RAA106 | - - - - - 264000 55200 37900 - - - 750 - - - 1700 12000 11400 1170 - - | - - - - - 264000 55200 37900 - - - 750 - - - 1700 12000 11400 1170 - - |
| RAA107 | - - - - - 313000 51700 37500 - - - 860 - - - 1700 14900 13700 - 1650 - - | - - - - - 313000 51700 37500 - - - 860 - - - 1700 14900 13700 - 1650 - - |
| RAA108 | - - - - - 305000 66500 44400 - - - 860 - - - 2200 12300 11300 - 1330 - - | - - - - - 305000 66500 44400 - - - 860 - - - 2200 12300 11300 - 1330 - - |
| RAA109 | - - - - - 313000 48200 30400 - - - 840 - - - 1900 12800 11800 - 1180 - - | - - - - - 313000 48200 30400 - - - 840 - - - 1900 12800 11800 - 1180 - - |
| RAA110 | - - - - - 305000 63300 27400 - - - 805 - - - 1900 13900 11400 - 1450 - - | - - - - - 305000 63300 27400 - - - 805 - - - 1900 13900 11400 - 1450 - - |
| RAA111 | - - - - - 298000 67700 27500 - - - 440 - - - 2200 14200 11800 - 1420 - - | - - - - - 298000 67700 27500 - - - 440 - - - 2200 14200 11800 - 1420 - - |
| RAA112 | - - - - - 280000 71900 32500 - - - 435 - - - 460 - - - 2500 12200 10400 - 1070 - - | - - - - - 280000 71900 32500 - - - 435 - - - 460 - - - 2500 12200 10400 - 1070 - - |
| STSH01 | - - - - - 99100 157300 - - - - - - - - - - - - - - - - | - - - - - 99100 157300 - - - - - - - - - - - - - - - - |
| STSH02 | - - - - - 45600 160700 - - - - - - - - - - - - - - - - | - - - - - 45600 160700 - - - - - - - - - - - - - - - - |

CHEMICAL ANALYSES IN PPM.

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / NODULE CODE / LATITUDE / DEPTH / (DG) - (M) - | MIN | FE | AL | SI | CA | TI | CO | NI | CU | ZN | | | |
|--|-----|----|----|-----------------|-----------------|--------|----|-----------|-------------|----------|----------|----------|-----------|
| / LUNGTITUDE / | P | K | RB | SR | MO | AG | CD | MG | V | CR | | | |
| | Y | SN | TE | PB | LA | W | GA | GE | ZR | BE | | | |
| STSH13 | - | - | - | 64200 24700 | 260200 | - | - | 50 9 | 2460 39 | 80 5 | 31 1 | 19 78 | 116 20 |
| STSH14 | - | - | - | 106500 8300 | 181600 | - | - | 114 31 | 5860 31 | 60 8 | 132 1 | 25 1 | 187 21 |
| STSH15 | - | - | - | 121600 13800 | 238500 | - | - | 107 16 | 50000 36 | 60 8 | 88 1 | 25 1 | 98 20 |
| STSH16 | - | - | - | 22300 7200 | 161200 | - | - | 20 12 | 1380 23 | 26 13 | 28 2 | 12 2 | 73 27 |
| STSH17 | - | - | - | 100500 8000 | 174700 | - | - | 94 15 | 5600 31 | 30 10 | 79 1 | 21 - | 156 28 |
| STSH18 | - | - | - | 93900 9000 | 253300 | - | - | 73 23 | 3700 34 | 72 10 | 114 2 | 22 1 | 136 20 |
| STSH19 | - | - | - | - | 376700 | - | - | 23 - | 0 -26 | 12 12 | 26 1 | 112 - | 107 - |
| STSH20 | - | - | - | - | 161900 8900 | - | - | - 22 | - 11500 | 90 - | 176 7 | 25 1 | 14 - |
| STSH21 | - | - | - | - | 186700 22300 | - | - | - 107 | - 2900 | 60 - | 53 11 | 14 4 | 112 19 |
| STSH22 | - | - | - | - | 69500 8800 | 238500 | - | - 25 | - 42 | - 11 | - 4 | - - | 57 22 |

CHEMICAL ANALYSES IN PPM .

| MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH / (LOC) / LUNGITUDE / | * MN * FF * AL * | * SI * CA * | * TI * CO * | * NI * CU * | * ZN * | |
|---|------------------|--------------------------|----------------------------|-----------------------|----------------------|----------------------|
| ----- | ----- | ----- | ----- | ----- | ----- | |
| STSH23 | - - - | - 72700 230000 8700 - | - - - | - 21 - 900 - 40 - | - - - | - 393 - 47 - 67 - |
| STSH24 | - - - | - 81400 222100 9200 - | - - - | - 17 - 1400 - 32 - | - - - | - 338 - 46 - 37 - |
| STSH25 | - - - | - - - | - - - | - 15 - 900 - 40 - | - - - | - 204 - 25 - 52 - |
| STSH26 | - - - | - - - | - 22800 329400 14300 - | - 7 - 800 - 40 - | - 71 - | - 110 - 22 - 37 - |
| STSH27 | - - - | - - - | - 98000 219900 8500 - | - - - | - 900 - | - 94 - 196 - - |
| STSH28 | - - - | - - - | - 101700 208400 8500 - | - - - | - 1000 - | - 94 - 51 - - |
| STSH29 | - - - | - - - | - 65200 296900 12300 - | - - - | - 41 - 850 - 40 - | - - - |
| STSH30 | - - - | - - - | - 107000 231400 10100 - | - - - | - 25 - 800 - 40 - | - - - |
| STSH31 | - - - | - - - | - 53700 293300 13100 - | - - - | - 13 - 900 - 40 - | - - - |
| STSH32 | - - - | - - - | - 14700 342500 15900 - | - - - | - 8 - 1000 - 40 - | - - - |

CHEMICAL ANALYSES IN PPM

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***** MARSDEN CODE / MODULE CODE / LATITUDE / DEPTH ****
----- (DU) - (M) - LONGITUDE /
***** MN FE AL SI CA TI CD NI CU ZN ****
***** P K RB SR MO AG CD MG V CR ****
***** Y SN TE PB LA H GA GE ZR BE ****
***** X *****
```

This file contains 2 oversize maps and/or charts which were not scanned. These maps and/or charts may be viewed in the original paper report or in the microfiche copy.